November 1, 2011

Peggy Shue  
Aera Energy LLC  
P.O. Box 11164  
Bakersfield, CA 93380-1164

Re: Notice of Preliminary Decision - Title V Permit Renewal  
District Facility # S-1547  
Project # S-1064899

Dear Ms. Shue:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Aera Energy LLC for its Heavy Oil operation at Aera's Heavy Oil Western stationary source, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

Attachments  
C: Dolores Gough, Permit Services Engineer

Seyed Sadredin  
Executive Director/Air Pollution Control Officer

Northern Region  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-8400  FAX: (209) 557-8475

Central Region (Main Office)  
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34948 Flyover Court  
Bakersfield, CA 93306-9725  
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www.valleyair.org  www.healthyliving.com
Gerardo C. Rios, Chief  
Permits Office (AIR-3)  
U.S. EPA - Region IX  
75 Hawthorne St.  
San Francisco, CA 94105

Re: Notice of Preliminary Decision – Title V Permit Renewal  
District Facility # S-1547  
Project # S-1064899

Dear Mr. Rios:

Enclosed for your review and comment is the District’s analysis of the application to renew the Federally Mandated Operating Permit for Aera Energy LLC for its Heavy Oil operation at Aera’s Heavy Oil Western stationary source, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 45-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner  
Director of Permit Services

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www.valleyair.org  www.healthyairliving.com
NOV 01 2011

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Title V Permit Renewal
District Facility # S-1547
Project # S-1064899

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of the application to renew the Federally Mandated Operating Permit for Aera Energy LLC for its Heavy Oil operation at Aera's Heavy Oil Western stationary source, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Leonard Scandura, Permit Services Manager, at (661) 392-5500.

Sincerely,

David Warner
Director of Permit Services

Attachments
C: Dolores Gough, Permit Services Engineer

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www.valleyair.org www.healthyairliving.com
NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED RENEWAL OF
THE FEDERALLY MANDATED OPERATING PERMIT

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control
District solicits public comment on the proposed renewal of the Federally
Mandated Operating Permit to Aera Energy LLC for its Heavy Oil operation at
Aera's Heavy Oil Western stationary source, California.

The District's analysis of the legal and factual basis for this proposed action,
project #S-1064899, is available for public inspection at
http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the
address below. There are no emission changes associated with this proposed
action. This will be the public's only opportunity to comment on the specific
conditions of the proposed renewal of the Federally Mandated Operating permit. If
requested by the public, the District will hold a public hearing regarding issuance of
this renewed permit. For additional information, please contact Mr. Leonard
Scandura, Permit Services Manager, at (661) 392-5500. Written comments on
the proposed renewed permit must be submitted within 30 days of the publication
date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN
JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 E.
GETTYSBURG AVE, FRESNO, CALIFORNIA 93726-0244.
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A. DRAFT RENEWED TITLE V OPERATING PERMIT  
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TITLE V PERMIT RENEWAL EVALUATION

Heavy Crude Oil Production

Date: October 26, 2011
Engineer: Dolores Gough
Lead Engineer: Richard Karss

Facility Number: S-1547
Facility Name: Aera Energy LLC
Mailing Address: P. O. Box 11164
Bakersfield CA 93389-1164

Contact Name: Peggy Shue
Phone: (661) 665-5689

Responsible Official: Barry Biggs
Title: Senior Vice-President

Project #: S-1064899
Deemed Complete: December 12, 2006

I. PROPOSAL

Aera Energy LLC was issued a Title V permit on January 31, 2003. As required by District Rule 2520, the applicant is requesting a permit renewal. The current Title V permit shall be reviewed and modified to reflect all applicable District and federal rules updated, removed, or added since the issuance of the initial Title V permit.

The purpose of this evaluation is to provide the legal and factual basis for all updated applicable requirements and to determine if the facility will comply with these updated requirements. It also specifically identifies all additions, deletions, and/or changes made to permit conditions or equipment descriptions.

II. FACILITY LOCATION

This Aera Energy facility (S-1547) is located at Heavy Oil Western Stationary Source in Kern County.
III. EQUIPMENT LISTING

A detailed facility printout listing all permitted equipment at the facility is included as Attachment C.

IV. GENERAL PERMIT TEMPLATE USAGE

The applicant does not propose to use any model general permit templates.

V. SCOPE OF EPA AND PUBLIC REVIEW

Certain segments of the proposed Renewed Operating Permit may be based on model general permit templates that have been previously subject to EPA and public review. The terms and conditions from the model general permit templates are not subject to further EPA and public review.

The applicant is not requesting any model general permit templates. Therefore, all federally enforceable conditions in this current Title V permit will be subject to EPA and public review.

VI. FEDERALLY ENFORCEABLE REQUIREMENTS

A. Rules Updated

- District Rule 2020, Exemptions
  (amended September 21, 2006 ⇒ amended December 20, 2007)

- District Rule 2201, New and Modified Stationary Source Review Rule

- District Rule 4101, Visible Emissions
  (amended November 15, 2001 ⇒ amended February 17, 2005)

- District Rule 4306, Boilers, Steam Generators, and Process Heaters—Phase 3
  (amended March 17, 2005 ⇒ amended October 16, 2008)

- District Rule 4307, Boilers, Steam Generators, and Process Heaters – 2.0 to 5.0 MMBtu/hr

- District Rule 4311, Flares
(amended June 15, 2006 ⇒ amended June 18, 2009)

- District Rule 4401, Steam-Enhanced Crude Oil Production Wells
  (amended December 14, 2006 ⇒ June 16, 2011)

- District Rule 4601, Architectural Coatings
  (amended October 31, 2001 ⇒ amended December 17, 2009)

- District Rule 4621, Gasoline Transfer Into Stationary Storage Containers,
  Delivery Vessels, and Bulk Plants
  (amended December 20, 2007)

- District Rule 4622, Gasoline Transfer Into Motor Vehicle Fuel Tanks
  (amended December 20, 2007)

- District Rule 4623, Storage of Organic Liquids
  (amended December 20, 2001 ⇒ amended May 19, 2005)

- District Rule 4702, Internal Combustion Engines – Phase 2

- District Rule 4703, Stationary Gas Turbines
  (amended August 17, 2006 ⇒ amended September 20, 2007)

- District Rule 8011, General Requirements

- District Rule 8021, Construction, Demolition, Excavation, Extraction, and
  Other Earthmoving Activities

- District Rule 8031, Bulk Materials

- District Rule 8041, Carryout and Trackout

- District Rule 8051, Open Areas
• District Rule 8061, *Paved and Unpaved Roads*  

• District Rule 8071, *Unpaved Vehicle/Equipment Traffic Areas*  
  (adopted November 15, 2001 ⇒ amended September 16, 2004)

• 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*  
  (amended January 28, 2009)

• 40 CFR Part 82, Subpart B, *Stratospheric Ozone*  
  (amended November 9, 2007)

• 40 CFR Part 82, Subpart F, *Stratospheric Ozone*  
  (amended June 8, 2008)

**B. Rules Adopted**

• District Rule 4307, *Boilers, Steam Generators and Process Heaters – 2.0 to 5.0 MMBtu/hr*  
  (adopted December 15, 2005)

• District Rule 4320, *Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater than 5.0 MMBtu/hr*  
  (adopted October 16, 2008)


**C. Rules Not Updated**

• District Rule 1081, *Source Sampling*  
  (amended December 16, 1993)

• District Rule 1100, *Equipment Breakdown*  
  (amended December 17, 1992)

• District Rule 1160, *Emission Statements*  
  (adopted November 18, 1992)

• District Rule 2010, *Permits Required*  
  (amended December 17, 1992)

• District Rule 2031, *Transfer of Permits*  
  (amended December 17, 1992)

• District Rule 2040, *Applications*  
  (amended December 17, 1992)
• District Rule 2070, Standards for Granting Applications (amended December 17, 1992)

• District Rule 2080, Conditional Approval (amended December 17, 1992)

• District Rule 2520, Federally Mandated Operating Permits (amended June 21, 2001)

• District Rule 4201, Particulate Matter Concentration (amended December 17, 1992)

• District Rule 4202, Particulate Matter–Emission Rate (amended December 17, 1992)

• District Rule 4305, Boilers, Steam Generators, and Process Heaters–Phase 2 (amended August 21, 2003)

• District Rule 4402, Crude Oil Production Sumps (amended December 17, 1992)

• District Rule 4701, Internal Combustion Engines – Phase 1 (amended August 21, 2003)


VII. REQUIREMENTS NOT FEDERALLY ENFORCEABLE

For each Title V source, the District issues a single permit that contains the Federally Enforceable requirements, as well as the District-only requirements. The District-only requirements are not a part of the Title V Operating Permits. The terms and conditions that are part of the facility’s Title V permit are designated as “Federally Enforceable Through Title V Permit.”

For this facility, the following are not federally enforceable and will not be discussed in further detail:

District Rule 4102, Nuisance

Condition 1 on the proposed facility wide permit S-1547-0-3 is based on District Rule 4102 and will therefore not be discussed any further.
VIII. PERMIT REQUIREMENTS

The purpose of this evaluation is to review changes to federally enforceable requirements; therefore, this compliance section will only address rules that have been amended or added since the issuance of the initial Title V permit except for District Rules 2010 and 2080. The language on some of the general permit conditions were updated and will be addressed in this section.

A. District Rule 2010 (Permits Required) and Rule 2080 (Conditional Approval)

As indicated above, these two rules have not been amended since the issuance of the initial Title V permit; however, there were updates to the language in the general conditions for dormant emissions units that are incorporated on the proposed PTOs. These updates, which affected only the steam generators in this application, are discussed in this section of the evaluation.

a. S-1547-10-24, '-12-23, '-40-28, '-61-24, '-70-23, '-76-23, '-87-24, '-116-19, '-130-18, '-362-18, '-363-17, '-1059-6, '-1075-6, '-1086: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Non-compliant Dormant Units)

• Conditions 1 through 3 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.

b. S-1547-22-24, '-361-16: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Compliant Dormant Units)

• Conditions 2 through 7 on the implemented ATC were updated and included as Conditions 1 through 6 on the proposed PTO.

c. S-1547-23-25, '-26-21, '-117-15: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Non-compliant Dormant Unit)

• Conditions 1 through 3 and 5 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.

d. S-1547- 47-21: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Non-compliant Dormant Unit)

• Conditions 1 through 3 and 11 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.
e. S-1547- 57-18, -58-18 and -119-19: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam Generator (Non-compliant Dormant Unit)

- Conditions 1 through 4 and 10 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.

f. S-1547- 67-25 and - 68-22: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam Generator (Non-compliant Dormant Unit)

- Conditions 1 through 3 and 6 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.

g. S-1547- 79-15, -120-17 and -147-14: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam Generator (Non-compliant Dormant Unit)

- Conditions 1 through 4 and 8 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.

h. S-1547- 145-20: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam Generator (Compliant Dormant Unit)

- Conditions 2 through 6 on the implemented ATC were updated and included as Conditions 1 through 6 on the proposed PTO.

i. S-1547-176-22: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Compliant Dormant Unit)

- Conditions 2 through 4 on the current PTO were updated and included as Conditions 1 through 6 on the proposed PTO.

j. S-1547-179-22: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Non-compliant Dormant Unit)

- Conditions 1 through 4 on the current PTO were updated and included as Conditions 1 through 3 on the proposed PTO.

k. S-1547-241-16: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Compliant Dormant Unit)

- Conditions 2 through 5 on the current PTO were updated and included as Conditions 1 through 6 on the proposed PTO.
l. S-1547-242-13: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator
   (Non-compliant Dormant Unit)

   • Conditions 1 through 4 on the current PTO were updated and included as
     Conditions 1 through 6 on the proposed PTO.

m. S-1547-243-13, '244-14, '355-19, '62.5 MMBtu/hr Natural Gas-Fired
   Steam Generator
   (Compliant Dormant Unit)

   • Conditions 1 through 4 on the current PTO were updated and included as
     Conditions 1 through 6 on the proposed PTO.

n. S-1547-356-22, '357-20, 62.5 MMBtu/hr Natural Gas -Fired Steam
   Generator (Non-compliant Dormant Unit)

   • Conditions 1 through 3 and 7 on the current PTO were updated and
     included as Conditions 1 through 3 on the proposed PTO.

o. S-1547-754-15, '755-12, '756-12: 62.5 MMBtu/hr Natural Gas/TVR Gas-
   Fired Steam Generator (Compliant Dormant Unit)

   • Conditions 2 through 11 on the implemented ATC were updated and
     included as Conditions 1 through 6 on the proposed PTO.

p. S-1547-807-13: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas- Fired
   Steam Generator (Non-compliant Dormant Unit)

   • Conditions 1 through 3 on the current PTO were updated and included as
     Conditions 1 through 3 on the proposed PTO.

q. S-1547-1074-6: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam
   Generator (Non-compliant Dormant Unit)

   • Conditions 1 through 3 and 12 on the current PTO were updated and
     included as Conditions 1 through 3 on the proposed PTO.

r. S-1547-1098-5: 62.5 MMBtu/hr Natural Gas -Fired Steam Generator
   (Non-compliant Dormant Unit)

   • Conditions 1 through 6 on the current PTO were updated and included as
     Conditions 1 through 3 on the proposed PTO.
B. District Rule 2020 - Exemptions

District Rule 2020 lists equipment, which are specifically exempt from obtaining permits, and specifies recordkeeping requirements to verify such exemptions. The rule was amended in December 20, 2007. The amendments to this rule do not have any effect on current permit requirements and will therefore not be addressed in this evaluation.

C. District Rule 2201–New and Modified Stationary Source Review Rule

District Rule 2201 has been amended since this facility's initial Title V permit was issued. This Title V permit renewal does not constitute a modification per section 3.26, defined as an action including at least one of the following items:

1) Any change in hours of operation, production rate, or method of operation of a current emissions unit, which would necessitate a change in permit conditions.
2) Any structural change or addition to a current emissions unit which would necessitate a change in permit conditions. Routine replacement shall not be considered to be a structural change.
3) An increase in emissions from an emissions unit caused by a modification of the Stationary Source when the emissions unit is not subject to a daily emissions limitation.
4) Addition of any new emissions unit which is subject to District permitting requirements.
5) A change in a permit term or condition proposed by an applicant to obtain an exemption from an applicable requirement to which the source would otherwise be subject.

However, there were changes made to the requirements of some permit units to update permit language, as discussed below:

CRUDE OILTANKS:

a. S-1547-643-16: 5,000 BBL (210,000 gallon) Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System

- Conditions 18, 20 and 22 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.
b. S-1547-644-8, -645-8, -647-8, -648-8 and -649-8: 2,000 BBL (84,000 gallon) Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System

- Conditions 4, 5 and 6 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

c. S-1547-652-8, -653-8 and -654-9: 5,000 BBL (210,000 gallon) Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System

- Conditions 4, 5 and 6 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

d. S-1547-843-9: 3000 BBL (126,000 Gallon) Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System

- Conditions 11, 12 and 16 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

e. S-1547-865-7: 210,000 Gallon Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System

- Conditions 16, 17 and 22 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

f. S-1547-866-5, 867-7, 868-5, 869-6, 870-5, 871-6, 872-7, 873-5, 874-6, 875-6, 876-4, 1018-6: (Various sizes) Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System

- Conditions 5, 6 and 11 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

g. S-1547-877-4: Induced Flotation Unit Connected to Vapor Control System

- Conditions 4 and 5 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.
h. **S-1547-882-6: WEMCO Induced Flotation Unit Served by a Vapor Control System**

- Conditions 4, 8 and 9 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

i. **S-1547-888-16: 7500 BBB (315,000 Gallon) Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System**

- Conditions 19, 20 and 22 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

j. **S-1547-889-10: Fixed Roof Crude Oil Surge Tank Connected to Vapor Control System**

- Conditions 17, 18 and 19 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

k. **S-1547-902-7: Surge Vessel Connected to Vapor Control System**

- Condition 6 was updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

l. **S-1547-903-7, 904-7 and 905-7: Induced Static Flotation Cell Connected to Vapor Control System**

- Conditions 1, 8, 9 and 11 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

m. **S-1547-906-7: Free Water Knockout Vessel Connected to Vapor Control System**

- Condition 9 was updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.
n. S-1547-1016-5 and 1017-5: Free Water Knockout Vessel Connected to Vapor Control System

- Conditions 4 and 5 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

o. S-1547-1019-7: Induced Static Flotation Cell Connected to Vapor Control System

- Conditions 1, 8 and 10 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

p. S-1547-1025-6: Induced Gas Flotation Cell Connected to Vapor Control System

- Conditions 4, 8 and 9 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

q. S-1547-1114-1: Fixed Roof Crude Oil Storage Tank Connected to Vapor Control System

- Conditions 4, 6 and 7 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

r. S-1547-1115-3: Induced Static Flotation Cell Connected to Vapor Control System

- Conditions 1 and 2 were updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

s. S-1547-1121-3: Surge Vessel Connected to Vapor Control System

- Condition 2 was updated by replacing the term "gas-tight" to "leak-free" condition since "gas-tight" had been superseded by "leak-free" in District Rule 4623.

t. S-1547-1159-4 and 1160-4: 2,000 BBL (84,000 Gallon) Fixed Roof Crude Oil Storage Tank Connected to Vapor Control System
• Conditions 2 and 8 were updated by replacing the term “gas-tight” to “leak-free” condition since “gas-tight” had been superseded by “leak-free” in District Rule 4623

STEAM GENERATORS AND PROCESS TREATERS:

a. S-1547-7-28 and '-16-23: 62.5 MMBtu/hr Natural Gas Fired Steam Generator with ULN Low NOx Burner with FGR

• Conditions 13 and 14 on the current PTO regarding approved locations were moved and included as Conditions 1 and 2 on the proposed PTO.

b. S-1547-13-20, '-62-24, '-65-21, '-66-22, '-121-21, '-122-22, '-134-16, '-152-16, '-157-16, '-164-17, '-190-21 and '-250-21: 62.5 MMBtu/hr Natural Gas Fired Steam Generator with ULN Low NOx Burner with FGR

• Conditions 12 and 13 on the current PTO regarding approved locations were moved and included as Conditions 1 and 2 on the proposed PTO.

c. S-1547-96-17: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator with ULN Low NOx Burner

• Condition 14 on the current PTO regarding NOx emission rate during initial operation was deleted as this is no longer applicable.

d. S-1547-158-15: 62.5 MMBtu/hr Natural Gas- Fired Steam Generator with ULN Low NOx Burner with FGR

• Conditions 11 and 12 on current PTO regarding approved locations were moved and included as Conditions 1 and 2 on the proposed PTO.

e. S-1547-175-23: 62.5 MMBtu/hr Natural Gas- Fired Steam Generator with ULN Low NOx Burner with FGR

• Condition 34 on current PTO regarding approved locations was removed as this condition is no longer applicable.

f. S-1547-355-19: 62.5 MMBtu/hr Natural Gas Fired Steam Generator with ULN Low NOx Burner with FGR
• Conditions 16 and 17 on current PTOs regarding approved locations were moved and included as Conditions 7 and 8 on the proposed PTO.

g. S-1547-357-20: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

• Conditions 5 and 6 on the current PTO regarding approved locations were updated and included as Conditions 4 and 5 on the proposed PTO.
• Conditions 7, 8 and 9 on source testing were removed from current PTO and replaced with Conditions 9 through 16 on the proposed PTO.

h. S-1547-994-12: Gas-Fired Heater Treater With One 4.2 MMBtu/hr burner

• Condition 25 on the current PTO was moved and included as Condition 2 on the proposed PTO.
• Condition 26 on the current PTO was updated by replacing the term "gas-tight" to "leak-free" and removing the leak-free definition since "gas-tight" had been superseded by "leak-free" in District Rule 4623. The revised condition is included as Condition 17 on the proposed PTO.

i. S-1547-995-9: Gas-Fired Heater Treater With One 4.2 MMBtu/hr burner

• Condition 26 on the current PTO was moved and included as Condition 2 on the proposed PTO.
• Conditions 27 and 30 on the current PTO were updated by replacing the term "gas-tight" to "leak-free" and removing the leak-free definition since "gas-tight" had been superseded by "leak-free" in District Rule 4623. The revised condition is included as Condition 19 on the proposed PTO.

j. S-1547-998-13: Gas-Fired Heater Treater With One 5.0 MMBtu/hr burner

• Conditions 7, 8 and 21 on the current PTO were moved and included as Conditions 1, 2 and 3 on the proposed PTO.
• Conditions 20 and 23 on the current PTO were updated by replacing the term "gas-tight" to "leak-free" and removing the leak-free definition since "gas-tight" had been superseded by "leak-free" in District Rule
4623. The revised condition is included as Condition 17 on the proposed PTO.

k. S-1547-999-12: Gas-Fired Heater Treater With One 5.0 MMBtu/hr burner

- Conditions 9, 10 and 24 on the current PTO were moved and included as Conditions 1, 2 and 3 on the proposed PTO.
- Conditions 23 and 26 on the current PTO were updated by replacing the term “gas-tight” to “leak-free” and removing the leak-free definition since “gas-tight” had been superseded by “leak-free” in District Rule 4623. The revised condition is included as Condition 18 on the proposed PTO.

l. S-1547-1000-13: Gas Heater Treater With One 5 MMBtu/hr burner

- Condition 5 on the current PTO was moved and included as Condition 2 on the proposed PTO.
- Conditions 22 and 24 on the current PTO were updated by replacing the term “gas-tight” to “leak-free” and removing the leak-free definition since “gas-tight” had been superseded by “leak-free” in District Rule 4623. The revised condition is included as Condition 18 on the proposed PTO.

m. S-1547-1001-13: Natural Gas Heater Treater with One 5 MMBtu/hr Burner

- Conditions 8, 9 and 23 were moved and included as Conditions 1, 2 and 3 on the proposed PTO.
- Conditions 22 and 25 on the current PTO were updated by replacing the term “gas-tight” to “leak-free” and removing the leak-free definition since “gas-tight” had been superseded by “leak-free” in District Rule 4623. The updated condition is included as Condition 18 on the proposed PTO.

n. S-1547-1005-12: Natural Gas Heater Treater with One 5 MMBtu/hr Burner

- Condition 18 on the current PTO was moved and included as Condition 2 on the proposed PTO.
- Conditions 20 and 21 on the current PTO were updated and included as Condition 16 on the proposed PTO.

o. S-1547-1007-12: Natural Gas Heater Treater with One 5 MMBtu/hr Burner
• Condition 20 on the current PTO was updated by replacing the term "gas-tight" to "leak-free" and removing the leak-free definition since "gas-tight" had been superseded by "leak-free" in District Rule 4623. The updated condition is included as Condition 17 on the proposed PTO.

p. S-1547-1008-11, '1009-11 and '1010-10: Natural Gas Heater Treater with One 5 MMBtu/hr Burner

• Condition 23 on the current PTO was updated by replacing the term "gas-tight" to "leak-free" and removing the leak-free definition since "gas-tight" had been superseded by "leak-free" in District Rule 4623. The updated condition is included as Condition 18 on the proposed PTO.

q. S-1547-1011-12: Gas Heater Treater with One 5 MMBtu/hr Burner

• Condition 26 on the current PTO was updated by replacing the term "gas-tight" to "leak-free" and removing the leak-free definition since "gas-tight" had been superseded by "leak-free" in District Rule 4623. The updated condition is included as Condition 17 on the proposed PTO.

D. District Rule 2520 – Federally Mandated Permits

There are no federally applicable Greenhouse Gas (GHG) requirements for this source. It should be noted that the Mandatory Greenhouse Gas Reporting rule (40 CFR Part 98) is not included in the definition of an applicable requirement within Title V (per 40 CFR 71.2). Therefore, there will be no further discussion of GHG in this evaluation.

E. District Rule 4101 - Visible Emissions

District Rule 4101 prohibits the discharge of any air contaminant for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker in shade as that designated as No. 1 on the Ringelmann Chart; or is of such opacity as to obscure an observer’s view to a degree equal to or greater than the smoke described in Section 5.1 of Rule 4101. The rule was amended in February 17, 2005.

a. S-1547-0-3 – Facility-Wide Requirements

• Condition 2 on the proposed PTO was updated to assure compliance with the requirements of this rule.
b. S-1547-699-3 and '700-3: 78 BHP Portable Emergency Standby Diesel-Fired Engine Powering an Electrical Compressor
   • Condition 2 was removed from the current PTO and moved to the proposed zero facility-wide permit.

c. S-1547-1033-3: 200 BHP Diesel-Fired Emergency Engine Powering an Electrical Generator
   • Condition 3 was removed from the current PTO and moved to the proposed zero facility-wide permit.

d. S-1547-1068-6, '1089-6 and '1070-6: 140 BHP Detroit-Allison Diesel-Fired Engine Used to Start a Gas Turbine
   • Condition 1 was removed from the current PTO and moved to the proposed zero facility-wide permit.

e. S-1547-1105-2: 1085 BHP Diesel-Fired Emergency Engine Powering an Electrical Generator
   • Condition 2 was removed from the current PTO and moved to the proposed zero facility-wide permit.

f. S-1547-1159-4 and '1160-4: 2000 BBL (84,000 Gallon) Fixed Roof Crude Oil Storage Tank
   • Condition 2 was removed from the current PTO and moved to the proposed zero facility-wide permit.

g. S-1547-1202-2 through '1207-1: (various volumes) BBL FWKO Connected to Vapor Recovery System
   • Condition 1 was removed from the current PTO and moved to the proposed zero facility-wide permit.

F. District Rule 4306 – Boilers, Steam Generators, and Process Heaters – Phase 3

This rule applies to any boiler, steam generator or process heater, with a rated heat input greater than 5 million Btu per hour that is fired with gaseous and/or liquid fuels.
Section 5.1 requires that NO$_X$ and CO emissions shall not exceed the limits specified in Table 1. For oil field steam generators (Table 1 Category C), NO$_X$ and CO emissions shall not exceed 15 ppmv and 400 ppmv, respectively. Units emissions, limited to an annual heat input of 9 billion Btu/year to 30 billion Btu/year (Table 1, Category H), shall not exceed 30 ppmv NO$_X$ per year and 400 ppmv CO per year.

Section 5.3 states that emission limits shall not apply during start-up or shutdown provided an operator complies with the requirements that the duration of each start-up or each shutdown shall not exceed two hours, the emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up or shutdown, and an operator may submit an application for a permit condition to allow more than two hours for each start-up or each shutdown provided the operator meets all of the conditions specified in Sections 5.3.3.1 through 5.3.3.3.

Section 5.4 requires that operators of any unit subject to the applicable emission limits of the rule shall install and maintain an operational APCO approved Continuous Emissions Monitoring System (CEMS) for NO$_X$, CO, and oxygen, or implement an APCO-approved Alternate Monitoring System. The operator of any Category H units shall install and maintain an operational non-resettable, totalizing mass or volumetric flow meter in each fuel line to each unit.

Section 6.1 requires that records required by Sections 6.1.1 through 6.1.4 shall be maintained for five calendar years and shall be made available to the APCO upon request.

Section 6.2 identifies the applicable test methods.

Section 6.3 requires that units subject to the requirements in Sections 5.1 or 5.2.3 shall be source tested to determine compliance with the applicable emission limits at least once every 12 months.

a. The following general conditions regarding compliance monitoring and testing and testing were updated on several of the steam generators:

**Current Conditions:**
- Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.5.6]
• Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Y

• Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4305, 6.1.5 and 4306, 6.1.4] Y

Updated Condition:
• Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3]

Current Condition:
• All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. [District Rules 4305, 5.5 and 4306, 5.5] Y

Updated Condition:
• All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Y
Updated Test Methods Condition:

- The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588.

b. S-1547-16-23: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

- Condition 27 on FGR requirement is no longer applicable and was deleted.

c. S-1547-40-28: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator (Dormant Unit)

- Conditions 19 through 24 are no longer applicable and were deleted. The monitoring and source testing general permit conditions are included as Conditions 18 through 25 and 27 on the proposed PTO.

d. S-1547-62-24: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

- Condition 18 on current PTO regarding shakedown period was deleted as this period has been completed.
- Condition 27 on the current PTO regarding FGR requirements was deleted as it is no longer applicable.
- Updated Rule 4306 citations on some, as appropriate, of the proposed conditions on the PTO.

e. S-1547-92-22, -127-20: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

- Condition 25 on the implemented ATC regarding FGR requirements was deleted as it is no longer applicable.

f. S-1547-139-20: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

- Condition 27 on the current PTO regarding NOx and CO startup testing was deleted.
• Condition 23 on the current PTO regarding FGR requirement was deleted.
• Conditions 15, 16 & 17 on the current PTO regarding startup and shutdown requirements were revised and included as Condition 11 on the proposed PTO.

g. S-1547-157-16: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

• Condition 31 on the current PTO is an ATC condition that has been implemented and not needed on the proposed PTO.
• Included general condition on source test plan as Condition 21 on the proposed PTO.

h. S-1547-238-29: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam Generator

• Conditions 21 through 23 on the current PTO were updated and included as Conditions 12 through 14 on the proposed PTO.
• Conditions 24 through 27 on the current PTO regarding alternate FGR monitoring were deleted as they are no longer applicable.
• Conditions 30 and 39 were removed from PTO as these are startup conditions.

i. S-1547-248-16: 62.5 MMBtu/hr Natural Gas/TVR Gas-Fired Steam Generator

• Condition 24 was removed from PTO as this is a startup condition.

j. S-1547-754-15: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

• Conditions 28, 29 and 30 on the implemented ATC regarding startup & shutdown requirements were updated and included as Condition 21 on the proposed PTO.
• Conditions 36 through 46 on the implemented ATC regarding previous alternate monitoring were deleted as they are no longer applicable.

k. S-1547-779-11: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas-Fired Steam Generator

• Condition 30 was removed from current PTO as this monitoring condition is no longer applicable.
I. S-1547-825-7: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

  • Conditions 30 and 37 through 40 from the implemented ATC regarding representative unit testing were deleted as they are no longer applicable.

m. S-1547-836-12 and -837-13 S-1547-825-7: 62.5 MMBtu/hr Natural Gas-Fired Steam Generator

  • Conditions 30 and 37 through 40 from the implemented ATC regarding representative unit testing were deleted as they are no longer applicable.

G. District Rule 4307 ~ Boilers, Steam Generators, and Process Heaters

- 2.0 MMBtu/hr to 5.0 MMBtu/hr

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters with heat rating of 2.0 MMBtu/hr up to and including 5.0 MMBtu/hr that are fired with gaseous and/or liquid fuels. The rule was amended on April 16, 2008.

a. S-1547-251-12: Gas-Fired Heater Treater with One 5.0 MMBtu/hr Burner

  • Conditions 2, 3 and 18 on recordkeeping are included as Conditions 17 and 18 on the proposed PTO.
  • Condition 20 on the current PTO regarding monitoring was revised and included as Condition 13 on the proposed PTO.
  • Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

b. S-1547-252-10: Gas-Fired Heater Treater with One 4.2 MMBtu/hr Burner

  • Conditions 9, 10, 11 and 12 on sulfur monitoring are included as Conditions 1, 2, 3 and 4 on the proposed PTO to be consistent with PTOs of similar units.
  • Condition 18 on the current PTO regarding monitoring was revised and included as Condition 14 on the proposed PTO.
• Conditions 15 and 16 on source testing on the current PTO were deleted as on-going source testing is not required.
• Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

c. **S-1547-663-12: Gas-Fired Heater Treater with One 5.0 MMBtu/hr Burner**

• Conditions 4, 5 and 20 on recordkeeping are included as Conditions 17, 18 and 19 on the proposed PTO.
• Condition 22 on the current PTO regarding monitoring was revised and included as Condition 13 on the proposed PTO.
• Conditions 26, 27, 28 and 29 on source testing on the current PTO were deleted as on-going source testing is not required.
• Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

d. **S-1547-666-13: Gas-Fired Heater Treater with One 4.2 MMBtu/hr Burner**

• Conditions 15, 16 and 17 on monitoring are updated and included as Condition 14 on the proposed PTO.
• Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

e. **S-1547-994-10: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner**

• Conditions 4, 5 and 19 on recordkeeping are included as Conditions 26, 27 and 28 on the proposed PTO.
• Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

f. **S-1547-995-13: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner**

• Conditions 5, 6 and 18 on recordkeeping are included as Conditions 33, 34, 35 and 36 on the proposed PTO.
• Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

g. **S-1547-998-13: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner**

• Conditions 2 and 14 on recordkeeping are included as Conditions 26, 27 and 28 on the proposed PTO.
• Updated Rule 4307 citations on several conditions on the PTO, as appropriate.
h. S-1547-999-12: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner
   • Conditions 4 and 17 on recordkeeping are included as Conditions 27, 28 and 29 on the proposed PTO.
   • Updated Rule 4307 citations on several conditions on the PTO, as appropriate.
   • Conditions 34, 35 and 36 on source testing on the current PTO were deleted as on-going source testing is not required.

i. S-1547-1000-13: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner
   • Conditions 6, 7 and 16 on recordkeeping were updated and included as Conditions 26, 27 and 28 on the proposed PTO.
   • Condition 12 on refractory curing is added on the proposed PTO to be consistent with Condition 27.
   • Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

j. S-1547-1001-13: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner
   • Conditions 8, 9 and 23 were moved and included as Conditions 1, 2 and 3 on the proposed PTO.
   • Conditions 2, 3 and 16 on recordkeeping were updated and included as Conditions 26, 27 and 28 on the proposed PTO.
   • Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

k. S-1547-1005-12: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner
   • Conditions 15, 16 and 17 on monitoring were updated and included as Condition 14 on the proposed PTO.
   • Condition 3 on emission rates is included as Condition 7 on the proposed PTO.
   • Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

l. S-1547-1006-12: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner
   • Conditions 7, 8 and 19 on recordkeeping are included as Conditions 32, 33 and 34 on the proposed PTO.
   • Updated Rule 4307 citations on several conditions on the PTO, as appropriate.
m. S-1547-1007-12: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner

- Conditions 4, 5 and 14 on recordkeeping are included as Conditions 26, 27 and 28 on the proposed PTO.
- Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

n. S-1547-1008-11: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner

- Conditions 4, 5 and 17 on recordkeeping are included as Conditions 27, 28 and 29 on the proposed PTO.
- Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

o. S-1547-1009-11 and-1010-11: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner

- Conditions 5, 6 and 17 on recordkeeping are included as Conditions 27, 28 and 29 on the proposed PTO.
- Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

p. S-1547-1011-12: Gas-Fired Heater Treater with One 5 MMBtu/hr Burner

- Conditions 22 through 25 on source testing were deleted as this unit is not required to do source testing.
- Conditions 5, 6 and 16 on recordkeeping are included as Conditions 26, 27 and 28 on the proposed PTO.
- Updated Rule 4307 citations on several conditions on the PTO, as appropriate.

H. District Rule 4311 – Flares

This rule limits the emissions of VOCs, NOx and SOx from the operations of flares. The rule was adopted on June 20, 2002 and amended on June 15, 2006 and June 18, 2009.

Sections 5.1 through 5.6 specify operational requirements of flares. Section 5.11 monitoring requirements for flares with a flaring capacity of ≥ 50 MMBtu/hr.
Section 6.1 requires operating, testing and monitoring records to be maintained and retained on-site for a minimum of five years and be made available to APCO, ARB and EPA upon request. Section 6.6 specifies methods of monitoring vent gas composition.

a. S-1547-414-8: 49 MMBtu/hr KALDAIR Model P-20-E Pipe Standby Flare
   - Rule 4311 citations were updated on the proposed PTOs on appropriate conditions. Conditions 1 through 5 are new conditions to assure compliance with the operational and monitoring requirements of the amended rule.

b. S-1547-588-5: 5 MMBtu/hr John Zink Model #EEF Standby Flare
   - Condition 4 on recordkeeping was updated on the proposed PTO.

I. District Rule 4320 – Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr

This rule limits NOx, CO, SO2 and PM10 emissions from boilers, steam generators and process heaters rated greater than 5 MMBtu/hr that are fired with gaseous and/or liquid fuels. This rule also provides a compliance option of payment of fees in proportion to the actual amount of NOx emitted over the previous year. This rule was adopted on October 16, 2008.

Section 5.1 requires an operator of a unit(s) subject to this rule to comply with one of the following, on a unit-by-unit basis:

5.1.1 Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
5.1.2 Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
5.1.3 Comply with the applicable Low-use Unit requirements of Section 5.5.

Section 5.2.1 requires that on and after the indicated Compliance Deadline, units shall not be operated in a manner which exceeds the applicable NOx limit specified in Table 1 of this rule. On and after October 1, 2008, units shall not be operated in a manner to which a carbon dioxide (CO) emissions limit of 400 ppmv is exceeded.

Section 5.4.1 requires that particulate matter emissions be limited by controlling the fuel sulfur content or the SO2 from the exhaust gas. Section 5.7 provides monitoring options for NOx, SOx and CO.
Section 6.0 specifies administrative requirements that include recordkeeping, compliance testing and testing methods.

Note: Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rule 4306 requirements, some of the updates under this section of this evaluation also applies under the Rule 4306 section above.

a. 62.5 MMBtu/hr Natural Gas Fired Steam Generator (Fee Paying Units for Rule 4320 Compliance)

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**In most permits, these are the last two conditions in the proposed PTOs.

The following two conditions were added on the proposed PTOs to assure compliance with Rule 4320, one is for recordkeeping of annual fuel usage and one is the payment of annual emission fees.

- Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Y

- Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Y

b. S-1547-733-10: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR
• Condition 16 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 13 on the proposed PTO.
• Condition 31 was deleted as it is a duplicate to condition 7 on the implemented ATC.

c. S-1547-744-10: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR

• Condition 15 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 12 on the proposed PTO.
• Condition 31 was deleted as it is a duplicate to condition 7 on the implemented ATC.

d. S-1547-745-12: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR

• Condition 13 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 10 on the proposed PTO.

e. S-1547-746-11: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR

• Condition 14 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 12 on the proposed PTO.
• Condition 30 was deleted as it is a duplicate to Condition 7 on the implemented ATC.

f. S-1547-747-10, -748-10: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR

• Condition 14 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 12 on the proposed PTO.
• Condition 30 was deleted as it is a duplicate to Condition 7 on the implemented ATC.

g. S-1547-749-10: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR
• Condition 20 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 14 on the proposed PTO.
• Condition 35 was deleted as it is a duplicate to Condition 7 on the implemented ATC.

h. S-1547-760-10: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR

• Condition 20 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 11 on the proposed PTO.
• Condition 35 was deleted as it is a duplicate to Condition 12 on the implemented ATC.

i. S-1547-834-10 and ‘-835-12: 62.5 MMBtu/hr Natural Gas/Vapor Recovery Gas Fired Steam Generator with FGR

• Condition 14 on the implemented ATC regarding sulfur and methane testing was revised and included as Condition 11 on the proposed PTO.
• Condition 30 was deleted as it is a duplicate to Condition 7 on the implemented ATC.

j. S-1547-1034-9: 62.5 MMBtu/hr Natural Gas Fired Steam Generator with FGR

• Condition 20 on “shakedown” period on implemented ATC was removed as this period has passed and no longer applicable.
• Condition 31 on initial source testing on implemented ATC was removed as this testing has been completed.

k. S-1547-1035-10: 62.5 MMBtu/hr Natural Gas Fired Steam Generator with FGR

• Condition 18 on “shakedown” period on implemented ATC was removed as this period has passed and no longer applicable.
• Condition 29 on initial source testing on implemented ATC was removed as this testing has been completed.

l. S-1547-1142-7: 85 MMBtu/hr Natural Gas-Fired Steam Generator
• Conditions 13, 18 and 21 regarding FGR requirements were removed from current PTO as these are no longer applicable.
• Condition 14 regarding NOx, CO and O2 periodic monitoring requirements from the current PTO was revised and included as Condition 13 on the proposed PTO.
• District Rule 4320 citations were added and/or updated, as appropriate to several of the general conditions on proposed PTO.

m. S-1547-1143-6: 85 MMBtu/hr Natural Gas-Fired Steam Generator

• Conditions 14, 19 and 22 regarding FGR requirements were removed from current PTO as these are no longer applicable.
• Condition 15 regarding NOx, CO and O2 periodic monitoring requirements from the current PTO was revised and included as Condition 13 on the proposed PTO.
• Condition 9 on “shakedown” period on implemented ATC was removed as this period has passed and no longer applicable.
• District Rule 4320 citations were added and/or updated, as appropriate to several of the general conditions on proposed PTO.

n. S-1547-1144-6: 85 MMBtu/hr Natural Gas-Fired Steam Generator

• Conditions 12, 17 and 20 regarding FGR requirements were removed from current PTO as these are no longer applicable.
• Condition 13 regarding NOx, CO and O2 periodic monitoring requirements from the current PTO was revised and included as Condition 12 on the proposed PTO.

o. S-1547-1145-3, '-1146-3, '-1148-3, '-1149-3 and '-1150-3: 85 MMBtu/hr Natural Gas-Fired Steam Generator

• Conditions 5 and 6 regarding start-up and shutdown requirements on the current PTO were replaced with standardized wording and included as Condition 5 on the proposed PTO.
• Condition 14 regarding NOx, CO and O2 periodic monitoring requirement from the current PTO was revised and included as Condition 13 on the proposed PTO.
• Conditions 19 and 22 regarding FGR requirements were removed from current PTO as these are no longer applicable.
p. S-1547-1147-3: 85 MMBtu/hr Natural Gas-Fired Steam Generator

- Conditions 6 and 7 regarding start-up and shutdown requirements on the implemented ATC were replaced with standardized wording and included as Condition 5 on the proposed PTO.
- Condition 15 regarding NOx, CO and O2 periodic monitoring requirements from the current PTO was revised and included as Condition 13 on the proposed PTO.
- Conditions 20 and 21 regarding FGR requirements were removed from current PTO as these are no longer applicable.

J. District Rule 4401 – Steam –Enhanced Crude Oil Production Wells

This rule limits VOC emissions from steam-enhanced crude oil production wells. It is applicable to all steam-enhanced crude oil production wells and any associated vapor collection and control systems. This rule was amended on June 16, 2011 and the amendments have affected some conditions in the current permits.

Section 4.0 specifies the type and number of steam-enhanced wells that are exempt from the requirements of this rule.

Section 5.0 specifies the requirements of this rule. Section 5.1 requires that steam-enhanced production well vents be closed or if open the vent shall be connected to a VOC collection and control system. Sections 5.2 through 5.5 establish leak standards and requirements for operation, inspection and re-inspection, and maintenance and repair.

Section 6.0 specifies administrative provisions that include requirements for recordkeeping, compliance source testing, test methods, inspection log, employee training and the operator management plan.

a. S-1547-359-20: Vapor Collection and Control System Serving 1657 TEOR Wells

- Conditions 14 through 34 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

b. S-1547-536-2: 5 Uncontrolled Cyclic Wells

- Conditions 2 through 4 on the current PTO were updated and included as Conditions 1 and 2 on the proposed PTO to comply with the requirements of the amended rule
• Conditions 1 and 5 through 8 on the current PTO are not applicable and were deleted.

c. S-1547-638-2: 396 Closed Vent Cyclic Wells and 5,384 Closed Vent Steam Drive Wells (Westside)

• Conditions 1, 3, 4, 5 and 7 through 19 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

d. S-1547-704-13: TEOR Operation with Well Vent Vapor Control System Consisting of Compressor(s), Pump(s), Pressure Vessel(s), and Cooler(s) Serving 41 Steam Drive Wells

• Conditions 7, 10 through 15, 17 through 20, and 23 through 31 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

e. S-1547-707-4: TEOR Operation with Well Vent Vapor Control System Serving 37 Steam Drive Wells

• Conditions 4 through 10 and 13 through 15 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

f. S-1547-708-6: TEOR Operation with Well Vent Vapor Collection System Serving 43 Steam Enhanced Wells

• Conditions 4 through 32 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

g. S-1547-714-9: TEOR Operation with Well Vent Vapor Collection System Serving up to 545 Steam Enhanced Wells

• Conditions 26 through 60 on implemented ATC S-1547-714-11 were deleted. They were updated and moved to the proposed PTO.

h. S-1547-819-6: TEOR Operation with Well Vent Vapor Collection System Serving up to 900 Steam Drive Wells

• Conditions 29 through 46 on the current PTO were deleted. They were updated and moved to the facility wide permit.

i. S-1547-820-2: TEOR Operation with 324 Wells Served by a Vapor Control System
• Conditions 7 through 9 and 11 through 25 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

j. S-1547-821-4: TEOR Operation with 215 Wells Served by a Vapor Control System

• Conditions 7, 8 and 11 through 25 on the current PTO were deleted. They were updated and move to the facility-wide permit.

k. S-1547-823-7: TEOR Operation with 40 Wells Including Liquid Knockout Vessels, heat Exchangers and Compressors

• Conditions 2, 3, 6 and 10 through 25 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

l. S-1547-838-3: 40 Uncontrolled Cyclic Steam Enhanced Pilot Testing Wells

• Conditions 1 through 7 were updated to comply with the amended rule requirements.
• Condition 8 on the current PTO is no longer applicable and was deleted.

m. S-1547-912-4: TEOR Operation with 69 Wells with Well Vent Vapor Collection System

• Conditions 1 through 4, 8, 11, 13 and 15 through 26 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

n. S-1547-1063-8: TEOR Operation with 146 Wells

• Conditions 2, 7 through 11, and 13 through 18 on the current PTO were deleted. They were updated and moved to the facility-wide permit.

o. S-1547-1079-14: TEOR Operation with 131 Wells Served by a Vapor Control System

• Conditions 2, 3, 5 and 9 through 22 were deleted. They were updated and moved to the facility-wide permit.
p. S-1547-1202-1, -1203-1, 1204-1, 1206-1 and 1207-1: FWKO Vessel Connected to a Vapor Control System

- Conditions 1 and 2 deleted. They were moved to the facility-wide permit.

q. S-1547-1205-1: 134 BBL Inlet Separator Vessel Connected to a Vapor Control System

- Conditions 1 and 2 were deleted. They were moved to the facility-wide permit.

r. S-1547-1209-1: Two TEOR Wells

- Conditions 4 and 7 through 38 were deleted. They were moved to the facility-wide permit.

K. District Rule 4601 - Architectural Coatings

This rule limits the emissions of VOCs from architectural coatings. It requires limiting the application of any architectural coating to no more than what is listed in the Table of Standards (Section 5.0). The rule was amended in December 17, 2009.

Section 2.0 – Applicability
The phrase “blends or repackages” was added to rule language to extend the applicability of rule language to facilities involved in those activities.

Section 3.0 – Definitions
Numerous definitions was added, deleted or modified in order to make the amended rule harmonize with definitions and rule requirements presented in the California Air Resources Board (ARB) Suggested Control Measures (SCM).

Section 4.0 – Exemptions
A reporting requirement was added for any architectural coating that is sold in a container with a volume of one liter or less. The exemption for architectural coatings was further defined by adding “coatings that are supplied and offered for sale” to current language, in order to make the rule consistent with the ARB SCM.

Section 5.0 – Requirements
The amended rule implements the recommended VOC limits per the ARB SCM. The following changes were as follows: 15 coating categories were
eliminated, ten were added, nineteen coatings categories remained unchanged, and the VOC content limits for 19 categories were lowered.

Section 6.0 – Administrative Requirements

Section 6.1 - Labeling Requirements
Labeling requirements were updated to add new labeling standards consistent with new coatings categories per the SCM.

Section 6.2 - Reporting Requirements
A new section was added to include reporting requirements per the SCM. The SCM contains a new requirement to submit sales data. Collection of this data is authorized in the California Health and Safety Code which requires submission of data to estimate emissions.

Section 6.3 - Test Methods
New sections were added to coincide with new coating categories pursuant to the ARB SCM.

Section 7.0 – Compliance Schedule
This section was updated to account for the new amendments to rule language by adding the phrase “the dates specified within the text of the rule.”

Section 8.0 – Averaging Compliance Option
This section was deleted in its entirety.

a. S-1547-0-3: Facility-Wide Requirements

- Conditions 23 through 27 on the current PTO were updated and included as Conditions 27 through 29 on the proposed PTO to ensure compliance with the updated rule requirements.

L. District Rule 4621 - Gasoline Transfer Into Stationary Storage Containers, Delivery Vessels, and Bulk Plants

This rule is to limit VOC emissions from storage containers located at bulk plants with capacities greater than 250 gallons and less than 19,800 gallons; from other stationary storage containers with capacities greater than 250 gallons; and from those storage containers that are not subject to the control requirements of Rule 4623 (Storage of Organic Liquids). The rule also applies to gasoline delivery vessels.
a. S-1547-913-6 and '914-6: Aboveground Gasoline Storage and Dispensing Operation Served by Phase I and Phase II Vapor Recovery Systems

- Condition 2 on the current PTO was updated to ensure compliance with the amended rule.
- Conditions 12 through 15 are new conditions added to the proposed PTOs for compliance with current rule requirements.
- Rule 4621 citations were updated on several conditions on the proposed PTOs to reflect citations from the amended rule.

b. S-1547-1022-10: Aboveground Gasoline Storage and Dispensing Operation Served by Phase I and Phase II Vapor Recovery Systems

- Condition 12 on the current PTO was updated to ensure compliance with the amended rule.
- Conditions 13 through 16 are new conditions added to the proposed PTOs for compliance with current rule requirements.
- Rule 4621 citations were updated on several conditions on the proposed PTOs to reflect citations from the amended rule.

M. District Rule 4622 - Gasoline Transfer Into Motor Vehicle Fuel Tanks

This rule is to limit emissions of gasoline vapors from the transfer of gasoline into motor vehicle fuel tanks. This rule applies to any gasoline storage and dispensing operation or mobile fueler from which gasoline is transferred into motor vehicle fuel tanks, except as provided in Section 4.0 of the rule.

a. S-1547-913-6 and '914-6: Aboveground Gasoline Storage and Dispensing Operation Served by Phase I and Phase II Vapor Recovery Systems

- Condition 12 on the current PTO was updated to ensure compliance with the amended rule.
- Conditions 13 through 16 are new conditions added to the proposed PTOs for compliance with current rule requirements.
- Conditions 5 and 9 on the current PTOs were deleted as they are not applicable to these units.
- Rule 4622 citations were updated on several conditions on the proposed PTOs to reflect citations from the amended rule.

b. S-1547-1022-10: Aboveground Gasoline Storage and Dispensing Operation Served by Phase I and Phase II Vapor Recovery Systems
• Condition 2 on the current PTO was updated to ensure compliance with the amended rule.
• Conditions 12 through 15 are new conditions added to the proposed PTOs for compliance with current rule requirements.
• Conditions 10 and 11 on the current PTOs were deleted as they are not applicable to these units.
• Rule 4622 citations were updated on several conditions on the proposed PTOs to reflect citations from the amended rule.

N. District Rule 4623 - Storage of Organic Liquids

This rule limits volatile organic compound (VOC) emissions from the storage of organic liquids. It applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored. The rule was amended in May 19, 2005.

Section 5.1 requires that no organic liquid shall be placed, held, or stored in any tank unless the tank is equipped with a VOC control system identified in Table 1.

Section 5.2 requires that pressure-vacuum relief valve shall be set to within ten (10) percent of the maximum allowable working pressure of the tank. The valves shall be permanently labeled with the operating pressure settings.

Section 5.6 requires that fixed roof tanks shall be fully enclosed and shall be maintained in a leak-free condition. The approved vapor recovery system shall consist of a closed system that collects all VOCs from the storage tank, and a VOC control device. This section also specifies the applicable VOC control device.

Section 5.7 states that only operators who elect to participate in the voluntary tank preventive inspection and maintenance, and tank interior cleaning program shall be allowed to use the provisions specified in Tables 3 to 5 and Section 5.7.5.

Section 6.2 requires initial and periodic TVP testing of each uncontrolled fixed roof tank.

Section 6.3 requires that tank subject to the requirements of this rule shall keep an accurate record of each organic liquid stored in each tank, including its storage temperature, TVP, and API gravity, except for fixed roof tanks equipped with a vapor recovery system.
Section 6.4 addresses the test methods approved by the APCO and EPA.

a. S-1547-223-3 and '639-5: 30,000 BBL (1,260,000 gallon) External Floating Roof Tank
   • Conditions 42 and 43 were revised on the proposed PTOs to update on current TVP testing requirements.
   • District Rule 4623 citations were updated on several of the conditions on the proposed PTOs.

b. S-1547-384-3: 65,000 BBL (2,730,000 gallon) Fixed Roof Petroleum Storage Tank with P/V Vents and Connected to Vapor Recovery System
   • Conditions 6, 7 and 8 were updated by replacing the term "gas-tight" to "leak-free" condition and defining leak-free pursuant to the amended rule. The Rule 4623 citation was updated in Condition 6.

c. S-1547-461-6 and '465-6: 1,000 BBL (42,000 gallon) and 3,000 BBL (126,000 gallon) - Fixed Roof Petroleum Tank Connected to Vapor Control System
   • Condition 14 was updated by replacing the term "gas-tight" to "leak-free" condition and defining leak-free pursuant to the amended rule. Rule 4623 citation was also updated.
   • Rule 4623 citations were updated on some of the conditions on the proposed PTOs.

d. S-1547-462-7 and '463-6: 500 BBL (21,000 gallon) and 2,000 BBL (84,000 gallon) - Fixed Roof Petroleum Tank Connected to Vapor Control System
   • Condition 13 was updated by replacing the term "gas-tight" to "leak-free" condition and defining leak-free pursuant to the amended rule. Rule 4623 citation was also updated.
   • Rule 4623 citations were also added, removed or updated, as appropriate, on some of the conditions on the proposed PTOs.

e. S-1547-888-10: 7,500 BBL (315,000 gallon) Fixed Roof Crude Oil Storage Tank Connected to Vapor Control System
   • Conditions 20 and 22 were updated by replacing "gas-tight" to "leak-free" condition. Rule 4623 citations were also updated. Leak-free definition was updated.
• Condition 31 on the current PTO was updated to match current Rule 4623 wording and included as Condition 31 on the proposed PTO.

f. S-1547-889-10: 7,500 BBL (315,000 gallon) Fixed Roof Crude Oil Storage Tank Connected to Vapor Control System

• Conditions 17 and 18 were updated by replacing "gas-tight" to "leak-free" condition and defining leak-free pursuant to the amended rule. Rule 4623 citations were also updated.

g. S-1547-949-10, '-950-10 and '-951-10: 5,000 BBL (210,000 gallon) Fixed Roof Crude Oil Storgae Tank Vented to Shared Vapor Control System

• Conditions 1 through 12 are included as Conditions 18 through 29 on the proposed PTOs.
• Conditions 13 through 29 are included as Conditions 1 through 17 on the proposed PTOs.
• Conditions 18, 19 and 29 were updated by replacing "gas-tight" to "leak-free" condition and included as 6, 7 and 9 on the proposed PTOs. Leak-free definition was updated.

h. S-1547—1014-10 and '-1015-10: 7,500 BBL (315,000 gallon) Fixed Roof Crude Oil Storgae Tank Vented to Shared Vapor Control System

• Conditions 1 through 12 are included as Conditions 18 through 29 on the proposed PTOs.
• Conditions 13 through 29 are included as Conditions 1 through 17 on the proposed PTOs.
• Conditions 18, 19 and 29 were updated by replacing "gas-tight" to "leak-free" condition and included as 6, 7 and 9 on the proposed PTOs. Leak-free definition was updated.

i. S-1547-1100-7 and '-1102-7: 1,300 BBL (54,600 gallon) Free-Water Knockout Vessel with Vapor Recovery System

• Conditions 2 and 6 were updated by replacing "gas-tight" to "leak-free" condition and defining leak-free pursuant to the amended rule. Rule 4623 citations were also updated.

j. S-1547-1101-7: 700 BBL (29,400 gallon) Free-Water Knockout Vessel with Vapor Recovery System
• Conditions 2 and 6 were updated by replacing "gas-tight" to "leak-free" condition and defining leak-free pursuant to the amended rule. Rule 4623 citations were also updated.

k. S-1547-1104-3: 895 BBB (37,600 gallon) Free-Water Knockout Vessel with Vapor Recovery System

• Conditions 5 through 9 were updated and included as Conditions 4 through 12 on the proposed PTO.

O. District Rule 4702 – Internal Combustion Engines – Phase 2

This rule is to limit NOx, CO and VOC emissions from internal combustion engines with a rated brake horsepower greater than 50 hp. This rule was adopted on August 21, 2003 and amended on January 18, 2007 and August 18, 2011.

a. S1547-699-3 and '-700-3: 78 BHP Portable Emergency Standby Diesel-Fired Engine Powering an Electrical Compressor

• Condition 4 from the current PTO was updated and included as Condition 10 on the proposed PTO.

b. S1547-703-3: 209 BHP Portable Emergency Standby Gasoline-Fired Engine Powering an Electrical Compressor

• Condition 15 was updated and included as Condition 16 to the proposed PTO. This condition incorporate recordkeeping requirements for all records required for this unit.

P. District Rule 4703 – Stationary Gas Turbine

This rule is to limit NOx emissions from stationary gas turbine systems. The provisions of the rule are applicable to all stationary gas turbine systems, which are subject to District permitting requirements, and with ratings equal to or greater than 0.3 megawatt (MW) or a maximum heat input rating of more than 3,000,000 Btu/hr. This rule was last amended on September 26, 2007.


- Condition 2 was removed and included with updates as Condition 34 on the proposed PTO.
- Condition 18 was removed as the testing methods were subsumed by Condition 28 on the proposed PTO.
- Condition 38 was removed as the specified demonstration period or date has been completed or passed.
- Condition 40 was updated and included as Condition 38.


- Condition 2 was removed and included with updates as Condition 43 on the proposed PTO.
- Condition 19 was removed as the testing methods were subsumed by Condition 31 on the proposed PTO.
- Condition 44 was removed as the recordkeeping requirements were subsumed by Condition 44 on the proposed PTO.
- Condition 49 was removed as the specified demonstration period or date has been completed or passed.

d. S-1547-879-9, -880-8 and -881-8: Solar Centaur Model T4500, 3.2 MW, 61.5 MMBtu/hr Gas-Fired Turbine Engine/Generator

- Conditions 1 through 5 on dormant conditions were removed and subsumed by Conditions 1 through 3.

Q. District Rule 8011 - General Requirements

The provisions of this rule are applicable to specified outdoor fugitive dust sources. The definitions, exemptions, requirements, administrative requirements, recordkeeping requirements, and test methods set forth in this
rule are applicable to all Rules under Regulation VIII (Fugitive PM10 Prohibitions) of the Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. The rule was amended in August 19, 2004.

a. **S-1547-0-3 – Facility-Wide Requirements**

   - Conditions 33 through 38 on the proposed PTO assure compliance with this rule.

R. **District Rule 8021 - Construction, Demolition, Excavation, Extraction, and Other Earthmoving Activities**

The purpose of this rule is to limit fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities. The rule was amended in August 19, 2004.

This rule applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on site, and travel on access roads to and from the site. This rule also applies to the construction of new landfill disposal sites or modification to current landfill disposal sites prior to commencement of landfilling activities.

Section 5.0 requires that no person shall perform any construction, demolition, excavation, extraction, or other earthmoving activities unless the appropriate requirements in sections 5.1 and 5.2 are sufficiently implemented to limit VDE to 20% opacity. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

a. **S-1547-0-3: Facility-Wide Requirements**

   - Condition 33 on the proposed permit assures compliance with this rule.

S. **District Rule 8031 - Bulk Materials**

The purpose of this rule is to limit fugitive dust emissions from the outdoor handling, storage, and transport of bulk materials. The rule was amended in August 19, 2004.

This rule applies to the outdoor handling, storage, and transport of any bulk material.
Section 5.0 requires that no person shall perform any outdoor handling, storage, and transport of bulk materials unless the appropriate requirements in Table 8031-1 of this rule are sufficiently implemented to limit VDE to 20% opacity or to comply with the conditions for a stabilized surface as defined in Rule 8011. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

a. S-1547-0-3: Facility-Wide Requirements

- Condition 34 on the proposed PTO assures compliance with this rule.

T. District Rule 8041 - Carryout and Trackout

The purpose of this rule is to limit fugitive dust emissions from carryout and trackout. The rule was amended in August 19, 2004.

This rule applies to all sites that are subject to Rules 8021 (Construction, Demolition, Excavation, Extraction, and other Earthmoving Activities), 8031 (Bulk Materials), and 8071 (Unpaved Vehicle and Equipment Traffic Areas) where carryout or trackout has occurred or may occur.

Section 5.0 requires that an owner/operator shall sufficiently prevent or cleanup carryout and trackout as specified in sections 5.1 through 5.8. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII. The use of blower devices, or dry rotary brushes or brooms, for removal of carryout and trackout on public roads is expressly prohibited. The removal of carryout and trackout from paved public roads does not exempt an owner/operator from obtaining state or local agency permits which may be required for the cleanup of mud and dirt on paved public roads.

a. S-1547-0-3: Facility-Wide Requirements

- Condition 35 on the proposed permit assures compliance with this rule.

U. District Rule 8051 - Open Areas

The purpose of this rule is to limit fugitive dust emissions from open areas. The rule was amended in August 19, 2004.

This rule applies to any open area having 3.0 acres or more of disturbed surface area that has remained undeveloped, unoccupied, unused, or vacant for more than seven days.
Section 5.0 requires that whenever open areas are disturbed or vehicles are used in open areas, the owner/operator shall implement one or a combination of control measures indicated in Table 8051-1 to comply with the conditions of a stabilized surface at all times and to limit VDE to 20% opacity. In addition to the requirements of this rule, a person shall comply with all other applicable requirements of Regulation VIII.

a. S-1547-0-3: Facility-Wide Requirements

- Condition 36 on the proposed permit assures compliance with this rule.

V. District Rule 8061 - Paved and Unpaved Roads

The purpose of this rule is to limit fugitive dust emissions from paved and unpaved roads by implementing control measures and design criteria. The rule was amended in August 19, 2004.

This rule applies to any new or current public or private paved or unpaved road, road construction project, or road modification project.

a. S-1547-0-3: Facility-Wide Requirements

- Condition 37 on the proposed PTO assures compliance with this rule.

W. District Rule 8071 - Unpaved Vehicle/Equipment Traffic Area

The purpose of this rule is to limit fugitive dust emissions from unpaved vehicle and equipment traffic areas by implementing control measures and design criteria. The rule was amended in September 18, 2004.

This rule applies to any unpaved vehicle/equipment traffic area of 1.0 acre or larger.

a. S-1547-0-3 – Facility-Wide Requirements

- Condition 38 on the proposed PTO assures compliance with this rule.
X. 40 CFR Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Subpart Dc applies to steam generating units for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 million Btu per hour or less, but greater than or equal to 10 million Btu per hour. This rule was amended in January 28, 2009.

Subpart Dc has no emission requirements for gas-fired units. All steam generators are fired on natural gas. Therefore, these units are not subject to subpart Dc.

Y. 40 CFR Part 82, Subpart B and F, Stratospheric Ozone

These regulations apply to servicing motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC). Sections of this regulation were amended in 2004 and 2008, and conditions 31 and 32 of the facility-wide permit assure compliance with the requirements.

Z. 40 CFR Part 64-CAM

40 CFR Part 64 requires Compliance Assurance Monitoring (CAM) for units that meet the following three criteria:

- 1) the unit must have an emission limit for the pollutant;
- 2) the unit must have add-on controls for the pollutant; these are devices such as flue gas recirculation (FGR), baghouses, and catalytic oxidizers; and
- 3) the unit must have a pre-control potential to emit (PE) of greater than the major source thresholds.

§64.1 defines a control device as equipment, other than inherent process equipment, that is used to destroy or remove air pollutants prior to discharge to the atmosphere.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>(lb/year)</th>
<th>(ton/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO\textsubscript{x}</td>
<td>20,000</td>
<td>10</td>
</tr>
<tr>
<td>SO\textsubscript{x}</td>
<td>140,000</td>
<td>70</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>200,000</td>
<td>100</td>
</tr>
<tr>
<td></td>
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<td>--------</td>
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<td>-----</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>140,000</td>
<td>70</td>
</tr>
<tr>
<td>CO</td>
<td>200,000</td>
<td>100</td>
</tr>
<tr>
<td>VOC</td>
<td>20,000</td>
<td>10</td>
</tr>
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</table>

**GAS TURBINES AND IC ENGINES**


- These permit units have emissions limits for SO$_x$, PM$_{10}$, CO and VOC; however, there is no add-on control for these criteria pollutants. Therefore, they are not subject to CAM.

These units have an emission limit for NO$_x$ and have add-on control in the form of SCR. However, they are equipped with a continuous emissions monitoring system to measure NO$_x$ and are therefore not subject to CAM.

b. **S-1547-1060-6: 3.5 MW Combined Cycle Gas Turbine Topping Cycle Cogeneration**

- This permit unit has emissions limit for SO$_x$, PM$_{10}$, CO and VOC; however, has no add-on control. Therefore, it is not subject to CAM.

The unit has NO$_x$ limit and an add-on control in the form of SCR and may be subject to CAM. The potential to emit before adding the SCR is 54,990 lb-NO$_x$/yr (from current PTO without SCR). Therefore, this unit is subject to CAM for NO$_x$.

Aera submitted a CAM plan. Compliance will be assured with permit conditions 5, 6, 8, 13, 15, 16, 23, 25, 26, 27, 31, 32, 34 and 35.

c. **S-1547-1061-6 and '1062-6: 3.5 MW Combined Cycle Gas Turbine Topping Cycle Cogeneration**

- These permit units have emissions limits for SO$_x$, PM$_{10}$, CO and VOC; however, have no add-on control for these pollutants. Therefore, they are not subject to CAM.

The units have NO$_x$ limit and have water injection systems to further control NO$_x$. The water injection systems can be considered as add-on controls; therefore, these units could be subject to CAM for NO$_x$. However, the units are equipped with continuous monitoring systems.
to measure the water to fuel ratio and fuel rate, and are therefore not subject to CAM.

d. S-1547-699-3 and ‘-700-3: 78 BHP Portable Emergency Standby Diesel Fired IC Engine Powering an Air Compressor

- These permit units are not subject to CAM as they do not have add-on controls.

e. S-1547-703-2: 209 BHP Portable Emergency Standby Gasoline Fired IC Engine Powering an Electrical Generator

- This permit unit is not subject to CAM as it does not have add-on controls.

f. S-1547-911-4, ‘-1033-3 and ‘-1105-2: Diesel Fired Emergency Standby IC Engine Powering an Electrical Generator

- These permit units have add-on controls in the form of positive crankcase ventilation systems to control VOCs; however, are not subject to CAM as the pre-control VOC emissions do not exceed the major source thresholds. Further, their non-emergency operation is limited to 20 hours per calendar year.

g. S-1547-1068-6, ‘-1069-6 and ‘-1070-6: 140 BHP Diesel Fired IC Engine to Start a Gas Turbine

- These permit units are not subject to CAM as they do not have add-on controls.

TEOR WELLS

a. S-1547-359-20: TEOR Operation with 1657 Oil Wells with Vapor Collection System

- This permit unit has a VOC emission limit and has a vapor collection system, which is not considered an add-on control. Therefore, this unit is not subject to CAM for VOC.

The unit has an add-on control for SOx (sulfur scrubber) and has a sulfur limit. The sulfur limit after scrubbing is 336.92 lb/day as sulfur. Assuming a conservative scrubbing efficiency of 90% (no scrubbing efficiency available), the pre-control SOx was estimated to be over the
140,000 lb/day major source threshold. Therefore, this unit is subject to CAM for SOx.

Aera submitted a CAM plan. Compliance will be assured with permit conditions permit conditions 1, 2, 3, 4, 5, 8, 9, 10 and 12.

b. S-1547-536-2 and '838:- Uncontrolled Cyclic Oil Wells

- These permit units have no VOC emission limit and have no add-on control; therefore, are not subject to CAM.

c. S-1547-638-11: TEOR Operation with Closed Vent Cyclic Wells and Closed Vent Wells.

- These permit units have no VOC emissions limit and have no add-on control; therefore, these units are not subject to CAM for VOC.

d. S-1547-704-20: TEOR Operation with Well Vent Vapor Control System

- This permit unit has fugitive VOC emissions limit but has no add-on control; therefore, the unit is not subject to CAM for VOC.

e. S-1547-707-8, '708-6: TEOR Operation with Well Vent Vapor Collection System

- These permit units have no VOC emissions limit and have no add-on control; therefore, these units are not subject to CAM for VOC.

f. S-1547-714-9: TEOR Operation with Well Vent Vapor Control with Sulfur Removal

- This permit unit has a VOC emission limit and an add-on control for SOx (sulfur scrubbers). The VOC goes to a vapor collection system, which is not considered an add-on control. Therefore, this unit is not subject to CAM for VOC. There is no SOx emission limit; therefore, this unit is also not subject to CAM for SOx.

g. S-1547-819-6: TEOR Operation with Well Casing Vent Vapor Control System

- This permit unit has a fugitive VOC emissions limit and has a vapor collection system, which is not considered an add-on control. Therefore, this unit is not subject to CAM for VOC. The unit has an
add-on control for SOx (sulfur scrubber) and has a sulfur limit. The sulfur limit after scrubbing is 258 lb/day as sulfur. Assuming a conservative scrubbing efficiency of 90% (no scrubbing efficiency available), the pre-control SOx was estimated to be over the 140,000 lb/day major source threshold. Therefore, this unit is subject to CAM for SOx.

Aera submitted a CAM plan. Compliance is assured with permit conditions 8, 9, 10, 14, 21, 22, 23, 24, 25, 26 and 27.

h. S-1547-820-2, '-821-6, '-823-7, '-912-4 and 1063-8: TEOR Operation with Vapor Control System

- This permit unit has a VOC emission limit and has a vapor collection system, which is not considered an add-on control. Therefore, this unit is not subject to CAM for VOC.

TANKS:

a. S-1547-223-3 and '-639-5: 30,000 BBL (1,260,000 Gallon) External Floating Roof Tank with Mechanical Shoe Primary Seal and "Zero Gap" Type Secondary Seal

- These permit units do not have add-on control and therefore are not subject to CAM.

b. S-1547- 384-3, '-461-6, '-462-7, '-463-6, '-888-10, '-889-10: Fixed Roof Crude Oil Tanks (different capacities) Connected to a Vapor Control System

- These permit units do not have VOC limits; however, are connected to vapor collection systems that are not considered as add-on controls. Therefore, they are not subject to CAM.

c. S-1547- 842-2: 55,464 Gallon Oilfield Production Sand Basin

- This permit unit does not have VOC limits or add-on control; therefore, is not subject to CAM.

d. S-1547-864-4 and '-907-7: Oilfield Sand Basins

- These permit units have VOC limits; however, have no add-on control and therefore are not subject to CAM.

- These permit units have VOC limits and connected to vapor collection systems that are not considered as add-on controls. Therefore, they are not subject to CAM.

f. S-1547-862-5, '863-5 and 882-6: WEMCO Induced Flotation Units (various capacities) Connected to a Vapor Control System

- These permit units have VOC limits and connected to vapor collection systems that are not considered as add-on controls. Therefore, they are not subject to CAM.

g. S-1547-1019-7, '1026-6 and '1115-3: Induced Static Flotation Cells) Connected to a Vapor Control System

- These permit units have VOC limits and vented to a vapor collection system that is not considered as an add-on control. Therefore, they are not subject to CAM.

h. S-1547-884-7: 84,00 Gallon Sand Dump Tank Connected to a Vapor Control System and Piping to Sulfur Scrubbing System

- This permit unit has a VOC limit but no SOx limit. The VOC collection system is not an add-on control and therefore is not subject to CAM.

i. S-1547-902-7: Surge Vessel Ventied to a Vapor Control System

- This permit unit has a VOC limit and vented to a collection system that is not considered as an add-on control. Therefore, this unit is not subject to CAM.

- These permit units have VOC limits and vented to a vapor collection system that is not considered as an add-on control. Therefore, these units are not subject to CAM.

k. S-1547- 1025-5, -1110-1, -1111-1 and 1113-1: Hydrochloric Acid Tanks with Fume Scrubber

- These permit units do not have criteria pollutant limits; therefore, are not subject to CAM.

l. S-1547-913-6, -914-6 and -1022-10: Aboveground Tank Gasoline Storage (1,300, 2000 and 4000 gallons) Dispensing Operation with Phase I and Phase II Vapor Recovery Systems

- These permit units do not have VOC limits and therefore are not subject to CAM.

**Steam Generators:** (Dormant units were not included)

a. 62.5 MMBtu/hr Gas-Fired Steam Generators with SO2 Scrubber and FGR, and Compliant with Rule 4306 NOx Limit

<table>
<thead>
<tr>
<th>Permit Unit</th>
<th>Pre-Control NOx (ton/yr)</th>
<th>Triggered NOx CAM?</th>
<th>Pre-Control SOx (ton/yr)</th>
<th>Triggered SOx CAM?</th>
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</thead>
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<td>0.05</td>
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<td>0.05</td>
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<td>S-1547-143-27</td>
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<td>S-1547-144-27</td>
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<td>No</td>
<td>0.05</td>
<td>No</td>
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<tr>
<td>S-1547-145-20</td>
<td>7.7</td>
<td>No</td>
<td>0.05</td>
<td>No</td>
</tr>
</tbody>
</table>

- The above permit units have NOx, SOx, PM_{10}, CO and VOC limits and have scrubber that is considered an add-on control for SOx. The units have also FGR which is considered an add-on control for NOx. Therefore, these units may be subject to CAM for NOx and SOx.
**Pre-Control NOx Emissions Calculation:**
These units currently meet Rule 4306 NOx limit of 0.018 lb/MMBtu with the FGR. To determine if CAM is triggered, the pre-control NOx potential to emit is calculated to show if the major source threshold of 20,000 lb-NOx/year is exceeded.

AP-42 Table 1.4-1 (7/98) lists the following emissions factors for boilers < 100 MMBtu/hr

<table>
<thead>
<tr>
<th>Control Type</th>
<th>Emission Factor (lb/10^8 scf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncontrolled</td>
<td>100</td>
</tr>
<tr>
<td>Controlled - Low NOx burners</td>
<td>50</td>
</tr>
<tr>
<td>Controlled - Low NOx burners/FGR</td>
<td>32</td>
</tr>
</tbody>
</table>

Control efficiency of FGR and corresponding emission factor:
100 x (50-32)/50 = 36%
0.018/(1-0.36) = 0.028 lb/MMBtu

Therefore, the pre-add on control emissions are:
0.028 lb/MMBtu x 62.5 MMBtu/hr x 8,760 hr/yr x ton/2,000 lb
= 7.7 ton/yr < 10 ton/yr; therefore CAM is not triggered for NOx.

**Pre-Control SOx Emission Calculation:**
The fuel sulfur concentration is 1 ppm as H2S (per Aera). The pre-control SOx emissions are calculated as follows:

Molecular weight of H2S = 34 lb/lb-mole
Molecular weight of SOx (as SO2) = 64 lb/lb-mole
Molar volume = 379 scf/lb-mole @ 60°F, 14.7 psia
Fuel gas heating value = 1,000 Btu/scf (District Practice)
Maximum annual operating hours = 8760 hr/yr

SOx (lb/dscf) = \((1 \text{ ppmv}/10^6) \times (1/379 \text{ scf/lb-mole}) \times (34 \text{ lb/lb-mole} \times 64/34)\)
= \(1.69 \times 10^{-7} \text{ lb/dscf}\)

SOx (lb/yr) = \(1.69 \times 10^{-7} \text{ lb/dscf} \times (1/1000 \text{ Btu/dscf}) \times (10^8 \text{ Btu/MMBtu}) \times 62.5 \text{ MMBtu/hr} \times (8760 \text{ hr/yr})\)
= 92.3 lb/yr (0.05 ton/yr) < 140,000 lb/yr (70 ton/yr)

b. 62.5 MMBtu/hr Gas-Fired Steam Generators with SO2 Scrubber and FGR, and Compliant with Rule 4320 NOx Limit of 12 ppmv @ 3% O2 (0.014 lb/MMBtu)

<table>
<thead>
<tr>
<th>Permit Unit</th>
<th>Pre-Control NOx (ton/yr)</th>
<th>Triggered NOx CAM?</th>
<th>Pre-Control SOx (ton/yr)</th>
<th>Triggered SOx CAM?</th>
</tr>
</thead>
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<td>S-1547-59-21</td>
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55
<table>
<thead>
<tr>
<th>Permit Unit</th>
<th>Pre-Control NOx (ton/yr)</th>
<th>Triggered NOx CAM?</th>
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</thead>
<tbody>
<tr>
<td>S-1547-7-28</td>
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- The above permit units have NOx, SOx, PM$_{10}$, CO and VOC limits and have scrubber that is considered an add-on control for SOx. The units have also FGR which is considered an add-on control for NOx. Therefore, these units may be subject to CAM for NOx and SOx.

**Pre-Control NOx Emissions:** The applicable Rule 4320 NOx limit for these steam generators is 0.014 lb/MMBtu. Using similar calculations as shown above, the pre-control NOx emission for each steam generator is 6.0 ton/yr which do not exceed the 20,000 lb/yr (10 ton/yr) major source threshold. Therefore, CAM is not triggered.

**Pre-Control SOx Emissions:** The fuel sulfur concentration is 1 ppm (as H2S). As calculated above, CAM is not triggered for SOx.

c. **62.5 MMBtu/hr Gas-Fired Steam Generator with FGR and Compliant with Rule 4306 NOx Limit (No SO2 scrubbers)**
<table>
<thead>
<tr>
<th>Index</th>
<th>Value</th>
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- The above permit units have NOx, SOx, PM10, CO and VOC limits and have FGRs as add-on controls for NOx; therefore, may be subject to CAM. The Rule 4306 NOx limit is 0.018 lb/MMBtu. As calculated above, the pre-control NOx emissions is 15,330 lb/yr (7.7 ton/yr) and do not exceed the 20,000 lb/yr (10 ton/yr) major source threshold. Therefore, CAM is not triggered.

d. 62.5 MMBtu/hr Gas-Fired Steam Generator with FGR and Compliant with the Rule 4320 NOx 12 ppm limit (no SO2 scrubbers)
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- The above permit units have NOx, SOx, PM$_{10}$, CO and VOC limits and have FGRs as add-on controls for NOx; therefore, may be subject to CAM. The Rule 4320 NOx limit is 0.014 lb/MMBtu. As calculated above, the pre-control NOx emissions is 11,977 lb/yr (6.0 ton/yr) and
do not exceed the 20,000 lb/yr (10 ton/yr) major source threshold. Therefore, CAM is not triggered.

**Process Heaters:**

a. S-1547-251-13 and '-252-10: Natural Gas-Fired Heater Treater with 5.0 MMBtu/hr Burner

   • These units have emissions limit for NOx, SOx, PM$_{10}$, CO and VOC; however, have no add-on control. Therefore, they are not subject to CAM.

b. S-1547-663-12 and '-666-13: Natural Gas-Fired Heater Treater with 5.0 MMBtu/hr Burner and Heat Crossover Line to Unfired Heater Treater Section

   • These units have emissions limit for NOx, SOx, PM$_{10}$, CO and VOC; however, have no add-on control. Therefore, they are not subject to CAM.

c. S-1547-990-10, '-991-9 and '-992-7: Heater Treater and Heat Crossover Line to Unfired Heater Treater Section Vented to Vapor Control with Permit Exempt Natural Gas-Fired Burner

   • These units have emissions limit for VOC and vented to a vapor control system with a separate District permit (S-1547-854). The vapor control system is not considered as an add-on control; therefore, these units are not subject to CAM.

d. S-1547-994-10, '-995-9, '-998-13 and '-999-12: Heater Treater with Natural Gas-Fired Burner and Heat Crossover Line to Unfired Heater Treater Section Vented to Vapor Control Listed on S-1547-865

   • These units have emissions limit for NOx, SOx, PM$_{10}$, and CO; however, have no add-on control and therefore not subject to CAM. VOC emissions from the heater treaters do not have limits and are vented to a vapor collection and control with a separate District permit (S-1547-865). These units are therefore not subject to CAM for VOC.

e. S-1547-1000-13 and '-1001-13: Heater Treater with 5.0 MMBtu/hr Burner Served by Vapor Control System Listed on S-1547-865
- These units have emissions limit for NOx, SOx, PM10, and CO; however, have no add-on control and therefore not subject to CAM. VOC emissions do not have limits and are vented to a vapor collection and control system with a separate District permit (S-1547-865). These units are therefore not subject to CAM for VOC.

f. S-1547-1005-14, '1-1007-14, '1-1008-11, '1-1009-11, '1-1010-11 and '1-1011-12: Heater Treater with a 5.0 MMBtu/hr Burner and Heat Crossover Line to Unfired Heater Treater Section Vented to Vapor Control Listed on S-1547-843

- These units have emissions limit for NOx, SOx, PM10, and CO; however, have no add-on control and therefore not subject to CAM. VOC emissions do not have limits and are vented to a vapor collection and control system with a separate District permit (S-1547-843); therefore, these units are not subject to CAM for VOC.

g. S-1547-1006-12: Heater Treater with 5.0 MMBtu/hr Burner and Heat Crossover Line to the Unfired Heater Treater Section and a Fluid Treatment Chamber Served by Vapor Recovery System

- This unit has emissions limit for NOx, SOx, PM10, and CO; however, has no add-on control and therefore not subject to CAM. VOC emissions do not have limits and are vented to a vapor collection system. Therefore, this unit is not subject to CAM for VOC.

**Flares:**

a. S-1547-414-8: 49 MMBtu/hr Kaldair Model P-20-E-Pipe Standby Flare

- This unit has emissions limit for NOx, SOx, PM10, and CO; however, has no add-on control and therefore not subject to CAM.

b. S-1547-588-4: 4 MMBtu/hr John Zink Model #EEF Standby Flare

- This unit has no emissions limit for NOx, SOx, PM10, and CO; therefore, is not subject to CAM.

**AA. 40 CFR Part 63, Subpart DDDDD, NESHAPS for Major Sources: Industrial, Commercial, and Institution Boilers and Process Heaters**

Industrial, commercial and institution (ICI) boilers and process heaters located at major sources of hazardous air pollutants (HAPs) are regulated
by this subpart. Major source in this subpart is defined in Section 63.2, except that:

1) Emissions from any oil or gas exploration or production well (with its associated equipment), and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units to determine whether such emission points or stations are major sources, even when emission points are in a contiguous areas or under common control;

2) Emissions from processes, operations or equipment that are not part of the same facility, as define din this section, shall not be aggregated; and

3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels with the potential for flash emissions shall be aggregated for a major source determination. For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated for a major source determination.

Only the HAP compounds listed in Table 1 of this subpart will be considered when determining compliance. Based on Aera’s storage HAP data submitted with this application, the total HAP is less than 25 ton/yr. Therefore, Aera is not subject to this subpart.

IX. PERMIT SHIELD

A permit shield legally protects a facility from enforcement of the shielded regulations when a source is in compliance with the terms and conditions of the Title V permit. Compliance with the terms and conditions of the Operating Permit is considered compliance with all applicable requirements upon which those conditions are based, including those that have been subsumed.

Conditions 42 and 43 on the proposed facility wide permit (S-1547-0-3) are current permit shields granted to the facility.

Rules 4201, 4301, 4406 and 4801: The condition on permit shield for these rules were moved and included as Condition 43 on the facility wide permit.

Rule 4407: The existing permit shield for this regulation granted to this facility is retained on the appropriate proposed PTOs for TEOR wells or operation.

40 CFR 60, Subpart Dc: The existing permit shield for this regulation granted to this facility is retained on the appropriate proposed PTOs for steam generators.
X. PERMIT CONDITIONS

See Attachment A - Draft Renewed Title V Operating Permit.

XI. ATTACHMENTS

A. Draft Renewed Title V Operating Permit
B. Previous Title V Operating Permit
C. Detailed Facility List
San Joaquin Valley
Air Pollution Control District

FACILITY: S-1547-0-3
EXPIRATION DATE: 05/31/2007

FACILITY-WIDE REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101, by using EPA method 9. If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101] Federally Enforceable Through Title V Permit

3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

4. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100, 6.1 and Kern County Rule 111] Federally Enforceable Through Title V Permit

5. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100, 7.0 and Kern County Rule 111] Federally Enforceable Through Title V Permit

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. [District Rule 1081] Federally Enforceable Through Title V Permit

7. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

8. The owner or operator of any stationary source operation that emits more than 25 tons per year of nitrogen oxides or reactive organic compounds, shall provide the District annually with a written statement in such form and at such time as the District prescribes, showing actual emissions of nitrogen oxides and reactive organic compounds from that source. [District Rule 1160, 5.0] Federally Enforceable Through Title V Permit

9. Any person building, altering or replacing any operation, article, machine, equipment, or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, shall first obtain an Authority to Construct (ATC) from the District unless exempted by District Rule 2020. [District Rule 2010, 3.0 and 4.0; and 2020] Federally Enforceable Through Title V Permit

10. The permittee must comply with all conditions of the permit including permit revisions originated by the District. All terms and conditions of a permit that are required pursuant to the Clean Air Act (CAA), including provisions to limit potential to emit, are enforceable by the EPA and Citizens under the CAA. Any permit noncompliance constitutes a violation of the CAA and the District Rules and Regulations, and is grounds for enforcement action, for permit termination, revocation, reopening and reissuance, or modification; or for denial of a permit renewal application. [District Rules 2070, 7.0; 2080; and 2520, 9.8.1 and 9.12.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate. Any amendments to these Facility-wide Requirements that affect specific Permit Units may constitute modification of those Permit Units.
11. A Permit to Operate or an Authority to Construct shall not be transferred unless a new application is filed with and approved by the District. [District Rule 2031] Federally Enforceable Through Title V Permit

12. Every application for a permit required under Rule 2010 (Permits Required) shall be filed in a manner and form prescribed by the District. [District Rule 2040] Federally Enforceable Through Title V Permit

13. The operator shall maintain records of required monitoring, where applicable, that include: 1) the date, place, and time of sampling or measurement; 2) the date(s) analyses were performed; 3) the company or entity that performed the analysis; 4) the analytical techniques or methods used; 5) the results of such analysis; and 6) the operating conditions at the time of sampling or measurement. [District Rule 2520, 9.4.1] Federally Enforceable Through Title V Permit

14. The operator shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, or report. Support information includes copies of all reports required by the permit and, for continuous monitoring instrumentation, all calibration and maintenance records and all original strip-chart recordings. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. The operator shall submit reports of any required monitoring at least every six months unless a different frequency is required by an applicable requirement. All instances of deviations from permit requirements must be clearly identified in such reports. [District Rule 2520, 9.5.1] Federally Enforceable Through Title V Permit

16. Deviations from permit conditions must be promptly reported, including deviations attributable to upset conditions, as defined in the permit. For the purpose of this condition, promptly means as soon as reasonably possible, but no later than 10 days after detection. The report shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All required reports must be certified by a responsible official consistent with District Rule 2520. [District Rules 2520, 9.5.2 and 1100, 7.0] Federally Enforceable Through Title V Permit

17. If for any reason a permit requirement or condition is being challenged for its constitutionality or validity by a court of competent jurisdiction, the outcome of such challenge shall not affect or invalidate the remainder of the conditions or requirements in that permit. [District Rule 2520, 9.7] Federally Enforceable Through Title V Permit

18. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. [District Rule 2520, 9.8.2] Federally Enforceable Through Title V Permit

19. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit

20. The permit does not convey any property rights of any sort, or any exclusive privilege. [District Rule 2520, 9.8.4] Federally Enforceable Through Title V Permit

21. The Permittee shall furnish to the District, within a reasonable time, any information that the District may request in writing to determine whether cause exists for modifying, revoking, or reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the District copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to EPA along with a claim of confidentiality. [District Rule 2520, 9.8.5] Federally Enforceable Through Title V Permit

22. The permittee shall pay annual permit fees and other applicable fees as prescribed in Regulation III of the District Rules and Regulations. [District Rule 2520, 9.9] Federally Enforceable Through Title V Permit

23. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit

24. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 2520, 9.13.2.2] Federally Enforceable Through Title V Permit
25. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under the permit. [District Rule 2520, 9.13.2.3] Federally Enforceable Through Title V Permit

26. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [District Rule 2520, 9.13.2.4] Federally Enforceable Through Title V Permit

27. No person shall manufacture, blend, repackage, supply, sell, solicit or apply any architectural coating with a VOC content in excess of the corresponding limit specified in the Table of Standards of District Rule 4601 for use or sale within the District. [District Rule 4601, 5.1] Federally Enforceable Through Title V Permit

28. All VOC-containing materials for architectural coatings subject to Rule 4601 shall be stored in closed containers when not in use. [District Rule 4601, 5.4] Federally Enforceable Through Title V Permit

29. The permittee shall comply with all the Labeling and Test Method requirements outlined in Rule 4601. [District Rule 4601, 6.1 and 6.3] Federally Enforceable Through Title V Permit

30. With each report or document submitted under a permit requirement or a request for information by the District or EPA, the permittee shall include a certification of truth, accuracy, and completeness by a responsible official. [District Rule 2520, 9.13 and 10.0] Federally Enforceable Through Title V Permit

31. If the permittee performs maintenance on, or services, repairs, or disposes of appliances, the permittee shall comply with the standards for Recycling and Emissions Reduction pursuant to 40 CFR Part 82, Subpart F. [40 CFR 82 Subpart F] Federally Enforceable Through Title V Permit

32. If the permittee performs service on motor vehicles when this service involves the ozone-depleting refrigerant in the motor vehicle air conditioner (MVAC), the permittee shall comply with the standards for Servicing of Motor Vehicle Air Conditioners pursuant to all the applicable requirements as specified in 40 CFR Part 82, Subpart B. [40 CFR Part 82, Subpart B] Federally Enforceable Through Title V Permit

33. Disturbances of soil related to any construction, demolition, excavation, extraction, or other earthmoving activities shall comply with the requirements for fugitive dust control in District Rule 8021 unless specifically exempted under Section 4.0 of Rule 8021(8/19/04) or Rule 8011 (8/19/04). [District Rules 8011 and 8021] Federally Enforceable Through Title V Permit

34. Outdoor handling and storage of any bulk material which emits dust shall comply with the requirements of District Rule 8031, unless specifically exempted under section 4 of Rule 8031 (8/19/04) or Rule 8011 (8/19/04). [District Rules 8011 and 8031] Federally Enforceable Through Title V Permit

35. An owner/operator shall prevent or cleanup any carryout or trackout in accordance with the requirements of District Rule 8041 Section 5.0, unless specifically exempted under Section 4.0 of Rule 8041 (8/19/04) or Rule 8011 (8/19/04). [District Rules 8011 and 8041] Federally Enforceable Through Title V Permit

36. Whenever open areas are disturbed, or vehicles are used in open areas, the facility shall comply with the requirements of Section 5.0 of District Rule 8051, unless specifically exempted under Section 4.0 of Rule 8051 (8/19/04) or Rule 8011 (8/19/04). [District Rules 8011 and 8051] Federally Enforceable Through Title V Permit

37. Any paved road or unpaved road shall comply with the requirements of District Rule 8061 unless specifically exempted under Section 4.0 of Rule 8061 (8/19/04) or Rule 8011 (8/19/04). [District Rules 8011 and 8061] Federally Enforceable Through Title V Permit

38. Any unpaved vehicle/equipment traffic area that anticipates more than 50 or more Average Annual Daily Trips (AADT) shall comply with the requirements of Section 5.1.1 of District Rule 8071. Any unpaved vehicle/equipment traffic area that anticipates 150 vehicle daily trips (VDT), or 150 VDT that are utilized intermittently for a period of 30 days or less during the calendar year shall comply with the requirements of Section 5.1.2 of District Rule 8071. All sources shall comply with the requirements of Section 5.0 of District Rule 8071 unless specifically exempted under Section 4.0 of Rule 8071 (9/16/04) or Rule 8011 (8/19/04). [District Rules 8011 and 8071] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
39. Any owner or operator of a demolition or renovation activity, as defined in 40 CFR 61.141, shall comply with the applicable inspection, notification, removal, and disposal procedures for asbestos containing materials as specified in 40 CFR 61.145 (Standard for Demolition and Renovation). [40 CFR 61 Subpart M] Federally Enforceable Through Title V Permit

40. The permittee shall submit certifications of compliance with the terms and standards contained in Title V permits, including emission limits, standards and work practices, to the District and the EPA annually (or more frequently as specified in an applicable requirement or as specified by the District). The certification shall include the identification of each permit term or condition, the compliance status, whether compliance was continuous or intermittent, the methods used for determining the compliance status, and any other facts required by the District to determine the compliance status of the source. [District Rule 2520, 9.16] Federally Enforceable Through Title V Permit

41. The permittee shall submit an application for Title V permit renewal to the District at least six months, but not greater than 18 months, prior to the permit expiration date. [District Rule 2520, 5.2] Federally Enforceable Through Title V Permit

42. When a term is not defined in a Title V permit condition, the definition in the rule cited as the origin and authority for the condition in a Title V permit shall apply. [District Rule 2520, 9.1.1] Federally Enforceable Through Title V Permit

43. Compliance with permit conditions in the Title V permit shall be deemed in compliance with the following outdated SIP requirements: Kern County Rules 111 and 401. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

44. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVAPCD Rules 1100, sections 6.1 and 7.0 (12/17/92); 2010, sections 3.0 and 4.0 (12/17/92); 2031 (12/17/92); 2040 (12/17/92); 2070, section 7.0 (12/17/92); 2080 (12/17/92); 4101 (2/17/05); 4201 (12/17/92); 4301 (12/17/92); 4406 (12/17/92); 4601, section 5.0, 6.0 and 7.0 (12/17/09); 4801 (12/17/92); 8021 (08/19/04); 8031 (08/19/04); 8041 (08/19/04); 8051 (08/19/04); 8061 (08/19/04); 8071 (08/19/04). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

45. Facility shall comply with all applicable requirements regarding preparation and implementation of a risk management plan by June 21, 1999 and shall abide by all applicable sections of 40 CFR Part 68. [40 CFR 68] Federally Enforceable Through Title V Permit

46. Facilities S-1135 and S-1547 constitute one stationary source. [District Rule 2201] Federally Enforceable Through Title V Permit

47. The permittee shall submit a Stationary Source Curtailment Plan and/or a Traffic Abatement Plan, pursuant to District Rule 6130 (as amended December 17, 1992) within 45 days to the APCO upon request. [District Rule 6130, 3.1] Federally Enforceable Through Title V Permit

48. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401. [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

49. The inspection requirements of Section 5.4.1 through Section 5.4.7 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10%) or less, as determined by the test methods in Section 6.3.4 of Rule 4401. [District Rule 4401, 4.7] Federally Enforceable Through Title V Permit

50. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit
51. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with either of the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, or the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.1.1 and 5.1.2] Federally Enforceable Through Title V Permit

52. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.2.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401 5.2.2] Federally Enforceable Through Title V Permit

53. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.4 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 2 of Rule 4401. [District Rule 4401 5.2.2] Federally Enforceable Through Title V Permit

54. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.2.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.9 of Rule 4401. [District Rule 4401 5.3.1] Federally Enforceable Through Title V Permit

55. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit

56. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.3.3] Federally Enforceable Through Title V Permit

57. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401 5.4.1] Federally Enforceable Through Title V Permit

58. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401 5.4.2] Federally Enforceable Through Title V Permit

59. In addition to the inspections required by Section 5.4.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visualy (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 3 of Rule 4401. [District Rule 4401 5.4.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
60. In addition to the inspections required by Sections 5.4.1, 5.4.2 and 5.4.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.4.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401 5.4.4] Federally Enforceable Through Title V Permit

61. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.4.7] Federally Enforceable Through Title V Permit

62. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401 5.4.8] Federally Enforceable Through Title V Permit

63. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to monitor component, or a critical component. [District Rule 4401 5.5.1] Federally Enforceable Through Title V Permit

64. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.5.2] Federally Enforceable Through Title V Permit

65. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401 5.5.3] Federally Enforceable Through Title V Permit

66. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.5.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 3 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401 5.5.4] Federally Enforceable Through Title V Permit

67. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401 5.5.4] Federally Enforceable Through Title V Permit

68. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 3 of Rule 4401. [District Rule 4401 5.5.5] Federally Enforceable Through Title V Permit

69. The time of the initial leak detection shall be the start of the repair period specified in Table 3 of Rule 4401. [District Rule 4401 5.5.6] Federally Enforceable Through Title V Permit

70. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401 5.5.7] Federally Enforceable Through Title V Permit

71. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401 6.1.1] Federally Enforceable Through Title V Permit

FACILITY-WIDE REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
72. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401 6.1.3] Federally Enforceable Through Title V Permit

73. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit

74. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401 6.1.5] Federally Enforceable Through Title V Permit

75. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401 6.1.6] Federally Enforceable Through Title V Permit

76. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.7] Federally Enforceable Through Title V Permit

77. Operator shall keep a list of all gauge tanks, as defined in Section 3.0 of Rule 4401. The list shall contain the size, identification number, the location of each gauge tank and specify whether the gauge tank is upstream of all front line production equipment. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit

78. The results of gauge tank TVP testing conducted pursuant to Section 6.2.3 shall be submitted to the APCO within 60 days after the completion of the testing. [District Rule 4401 6.1.9] Federally Enforceable Through Title V Permit

79. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401 6.1.10] Federally Enforceable Through Title V Permit

80. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. A process system as defined in Section 3.30 of Rule 4401 is not subject to compliance source testing requirements. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

81. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection are controlled by an internal combustion engine subject to Rule 4702, a combustion device subject to Rule 4320, 4307 or 4308, a flare subject to Rule 4311. [District Rule 4401 6.2.2] Federally Enforceable Through Title V Permit

82. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.0 of Rule 4401: Conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.9 of Rule 4401. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit

83. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401 6.3.1] Federally Enforceable Through Title V Permit
84. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401 6.3.2] Federally Enforceable Through Title V Permit

85. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3] Federally Enforceable Through Title V Permit

86. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401 6.3.5] Federally Enforceable Through Title V Permit

87. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak. The date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401 6.4] Federally Enforceable Through Title V Permit
STEAM GENERATORS
PERMIT UNIT: S-1547-1-32

EXPIRATION DATE: 06/31/2007

SECTION: 26  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU.HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER FLUE GAS RECIRCULATION AND SO2 SCRUBBER SHARED WITH S-1547-3, (#25 DIS# 19951-74) (ANDERSON-FITZGERALD DEHY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE.KERN COUNTY, CA
9. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

10. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 111.0 lb/day, SOx (as SO2): 7.5 lb/day, VOC: 10.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-3-28
SECTION: 26   TOWNSHIP: 29S   RANGE: 21E
EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN UNL BURNER,
A FLUE GAS RECIRCULATION (FGR) SYSTEM, AND A SO2 SCRUBBER SHARED WITH S-1547-1, (#26 DIS# 19952-75) (ANDERSON/FITZGERALD DEHY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of
   quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount
   and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type
   of uncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
   Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
   Enforceable Through Title V Permit

4. If the unit is fired on uncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
   the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
   ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
   40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
   [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2201]
   Federally Enforceable Through Title V Permit

8. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201]
   Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

10. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

11. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as S02): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801,3.1] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306,5.5] Federally Enforceable Through Title V Permit

18. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 1B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-7-28

SECTION: NW12  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN 3.2 LOW NOX BURNER, O2 CONTROLLER, AND FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#12-2L, DIS# 19960-74)

PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: NW/4 Section 12, T29S, R21E and Section 34, T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
6. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

9. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 10 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2] Federally Enforceable Through Title V Permit

9. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
10. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

12. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

13. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

14. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

15. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

17. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

28. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

29. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Steam generator shall be equipped with O2 controller and excess O2 shall be maintained between 0.5 and 3.0%. [District Rule 4305] Federally Enforceable Through Title V Permit

5. Staged combustion shall be removed or rendered inoperable. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Only PUC-quality natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rule 2201 and Rule 4305]

8. The steam generator shall be equipped with an FGR valve positioning indicator. [District Rule 4305] Federally Enforceable Through Title V Permit

9. Except during periods of steam generator startup/shutdown, steam generator shall not be operated unless flue gas recirculation system is operating. [District Rule 4305] Federally Enforceable Through Title V Permit

10. Steam generator may be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

11. The acceptable range of flue gas recirculation (FGR) valve settings shall be established by testing emissions from this or other representative unit(s) as approved by the District. The acceptable maximum and minimum FGR valve settings shall be the settings with which compliance with applicable NOx and CO emission rates have been demonstrated through District approved source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

12. The acceptable range of FGR valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit
13. If the flue gas recirculation valve setting deviates from the acceptable range, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the flue gas recirculation valve settings are not corrected promptly, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits at the observed flue gas recirculation valve setting. [District Rule 4305] Federally Enforceable Through Title V Permit

14. Permittee shall record the FGR valve position and date and time when the FGR valve position was checked on a weekly basis. Permittee shall record any corrective action taken to maintain the FGR setting within the acceptable range. Permittee shall maintain records of date and duration of each startup and each shut down. Records shall be retained for a period of five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

15. Compliance source testing shall be conducted under conditions representative of normal operation except during establishment of acceptable minimum and maximum FGR valve settings. [District Rule 1081] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

17. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit
21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-13-20
EXPIRATION DATE: 06/30/2007

SECTION: 28  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (MAXWELL #36 (NORTH MIDWAY), DIS #20604-76)

PERMIT UNIT REQUIREMENTS

1. This generator is permitted to operate at the following locations: NE 1/4 Section 27 of Township 31S, Range 22E and Section 28 of Township 28S, Range 21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c)—A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-13-20: Oct 25 2011 8:42AM - GOUCHD
9. Natural gas fuel sulfur content shall not exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10:
0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15
ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1]
Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per
hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11
pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or
0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable
Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day,
NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory
curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a
shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not
exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and
refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring
shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring.
Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the
last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the
allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as
possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed
the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District
within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of
conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The
permittee must then correct the violation, show compliance has been re-established, and resume monitoring
procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee
may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition.
[District Rules 4305 and 5.4; 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions
representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either
taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out
over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2
concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of
exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken
to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable
Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This steam generator is approved to operate at the following locations: NW/4 Section 12, T29S, R21E and Section 34, T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

7. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MBMtu, SOx (as SO2): 0.055 lb/MBMtu, VOC: 0.003 lb/MBMtu, NOx (as NO2): 0.018 lb/MBMtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MBMtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Natural gas combusted in this unit shall consist primarily of methane and contain less than 5% by weight hydrocarbons heavier than butane. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.004 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 6.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 2.8 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 12.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 1081, 6.1; 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010]

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2 [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

5. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

8. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

15. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Approved locations for this steam generator are: NEI2 T3OS R21E (Calso Lease) and Sec. 33 T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of uncertified fuel used. [District Rule 2520, 9.12] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on uncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as S02): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 19 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-24-20: Sep 20, 2011 12:06PM - GOOG2H
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emission rates from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu (as SO2), NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

5. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

8. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

15. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

14. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

15. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

17. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-47-21
SECTION: 33  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #52 DIS# 21832-78 WITH O2 CONTROLLER AND ANDERSON 2000 SOX SCRUBBER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.035 lb/MMBtu, SOx (as S02): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2; or CO: 25.8 ppmv @3% O2. [District Rule 2201 and District Rule 4305, 5.1] Federally Enforceable Through Title V Permit

5. SOx scrubber shall be utilized whenever vapor recovery gas is burned in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Scrubber mist eliminator shall be properly cleaned and maintained. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Scrubber SO2 control efficiency shall be maintained at no less than 95%. [District Rule 2201] Federally Enforceable Through Title V Permit

10. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

12. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

23. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-57-18
SECTION: 20  TOWNSHIP: 28S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#70 DIS# 27452-81) WITH C.E. NATCO SO2 SCRUBBER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. SOx scrubber shall be utilized whenever vapor recovery gas is burned in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

5. {282} Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule]

6. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Emissions from this unit shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

8. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-57-18; Sep 26, 2011 12:00 PM - GOUGH
10. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

17. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-58-18

SECTION: 20 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS/VAPORECOV RECOVERY GAS FIRED STEAM GENERATOR (#71 DIS# 27453-81) WITH C.E. NATCO SO2 SCRUBBER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. SOx scrubber shall be utilized whenever vapor recovery gas is burned in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule]

6. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Emissions from this unit shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

8. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
10. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

17. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
19. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

5. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

12. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

13. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

17. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1; 4320, 5.2 and 5.4] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 94.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7,665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070,4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

11. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber liquid pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

15. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 4305, 5.1; 4306, 5.1 and 4320, 5.2 and 5.4] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown, and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 94.5 lb/day, NOx (as NO2): 54.0 lb/day or 7,665 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM-D3588. [District Rules 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. {537} If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2] Federally Enforceable Through Title V Permit

9. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.486). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

13. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

14. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 0.058 lb/MBtu, SOx (as SO2): 0.063 lb/MBtu, NOx (as NO2): 0.036 lb/MBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

18. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

19. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

20. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

21. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305, 6.1] Federally Enforceable Through Title V Permit

23. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve position and fuel firing rate shall be returned to the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

25. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

31. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
32. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

33. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

34. All units in a group for which representative units are source for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

35. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3031, D4084, D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

38. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

39. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley  
Air Pollution Control District
9. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This equipment is approved to be operated at the following locations: Section 18, T28S/R21E and NW/4 Section 12, T29S/R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hvh - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305,6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305,6.1; 4306, 6.1and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This equipment is approved to be operated at the following locations: Section 18, T28S/R21E and NW/4 Section 12, T29S/R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

8. {565} Compliance in permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 108, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rule 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

5. No less than 0.8 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

9. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

11. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

13. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

15. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rules 1081, 7.1] Federally Enforceable Through Title V Permit

16. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

18. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

5. No less than 0.8 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

8. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

9. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. The deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
10. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

11. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

13. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

14. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

15. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

16. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

17. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

18. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. This requirement shall not supersede a more stringent NSR or PSD permit testing requirement. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

11. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305,6.3.2] Federally Enforceable Through Title V Permit

12. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

13. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

14. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

16. Approved locations for this steam generator are: Sec. 28 T28S R21E and SE26 T29S R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rule 2201 and Rule 4305] Federally Enforceable Through Title V Permit

20. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

21. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

22. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit
23. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

25. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

28. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

32. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-74-26
EXPIRATION DATE: 09/30/2007

SECTION: NW12 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR #12-2F (DIS # 21938-76 EQUIPPED WITH A COEN QLN-ULN BURNER AND A JOHN ZINK/TODD COOL FUEL SYSTEM

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Not less than 0.5 miles of roadway shall be paved and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
6-1547-74-26 Rev 36 2011 12:19PM - GOUGO
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10:
0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1, 4306, 5.1 and 4320, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-76-26
SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH FLUE GAS
RECIRCULATION AND SO2 SCRUBBER, AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS, (#87,
DIS# 27469-80)

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an
Authority to Construct. [District Rule 2010]

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title
V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title
V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel
testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly
testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-
combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated
emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested
not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show
compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory.
[District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable
Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-76-26: Sep 20 2011 12:18PM - Gough
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

11. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

12. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

13. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

14. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.3.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

16. Approved locations for this steam generator are SE33 T28S R21E (gen. site 3346 or 3356), NW01 T28S R20E (gen. site 121), NW34 T28S R21E and NE34 T28S R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

21. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit
22. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Emission rates shall not exceed any of the following: PM10: 0.0138 lb/MMBtu, SOx (as SO2): 0.015 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 47.5 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

27. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

28. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

29. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

31. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Duration of startup and shutdown (as defined in Rule 4305) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

33. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

36. Permittee shall maintain accurate records of the time and duration of non-operation of this unit. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-78-23
SECTION: NE29 TOWNSHIP: 28S RANGE: 21E
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER,
WITH FLUE GAS RECIRCULATION, SHARED SO2 SCRUBBER LISTED ON S-1547-77, AND PIPING FROM S-1547-
1079 (EAST FLANK LEASE), (#89, DIS# 27471-80) (GEN SITE 2972)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through
Title V Permit

4. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

5. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080]
Federally Enforceable Through Title V Permit

6. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally
Enforceable Through Title V Permit

7. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60
days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12
months. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less
than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel
supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months
by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally
Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2 [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2 & 5.4] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: NOx (as NO2): 54.0 lb/day or 7,665 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
20. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5, 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. [District Rules 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Emissions from this unit shall not exceed any of the following: NOx (as NO2): 30 ppmv @3% O2; or CO: 400 ppmv @3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

6. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

8. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

15. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. No less than 3.0 miles of roadway shall be paved and properly maintained with hot mix asphalt material at South Belridge field on Poleline Road from the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Approved locations for this steam generator are: NE, NW, SE, SW 1/4 Section 34, T28S, R21E; SE 1/4 Section 26, T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. {537} If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2 and 4305, 6.2] Federally Enforceable Through Title V Permit

12. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

14. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

15. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

16. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

17. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

19. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit
21. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

22. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

23. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

24. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

26. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

27. Duration of startup and shutdown (as defined in Rule 4305) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

30. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-92-22
SECTION: NW12  TOWNSHIP: 29S  RANGE: 21E

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
   Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
   Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
   the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
   ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements
   of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended
   December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these
   requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
   40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
   [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rules 4406, 4.0 and 4801, 3.0] Federally Enforceable Through Title V Permit

9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown, and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.7 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-94-15
EXPIRATION DATE: 05/31/2007

SECTION: NE33  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND A FLUE GAS
RECIRCULATION (FGR) SYSTEM (#105 DIS# 27582-80) (GEN SITE 3363)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of
quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount
and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type
of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel
testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly
testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through
Title V Permit

7. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory
curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a
shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not
exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and
refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V
Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.007 lb/MMBtu, SOx (as SO2): 0.009 lb/MMBtu, VOC: 0.007 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

11. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2] Federally Enforceable Through Title V Permit

19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1, 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

22. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

7. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.007 lb/MMBtu, SOx (as SO2): 0.009 lb/MMBtu, VOC: 0.007 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

11. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081 7.1] Federally Enforceable Through Title V Permit
17. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1, 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

21. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-96-17
EXPIRATION DATE: 06/30/2007

SECTION: NE33  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH ONE COEN QLN-ULN LOW-NOX BURNER AND
FLUE GAS RECIRCULATION, (#107, DIS# 27583-80) (GEN SITE 3363)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of
quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount
and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type
of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel
testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly
testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not
been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40
CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement.
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.007 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.007 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

12. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

23. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-114-17
EXPIRATION DATE: 05/31/2007

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER, O2 CONTROLLER AND FLUE GAS RECIRCULATION, (MOCO #708 (SOUTH MIDWAY), DIS# 27477-81)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Natural gas combusted in this unit shall consist primarily of methane and contain less than 5% by weight hydrocarbons heavier than butane. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-114-17: Oct 29 2011 8:42AM - GOUCHI
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.004 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 6.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

13. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

14. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

15. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

16. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 47.5 ppmv @ 3% O2. [District NSR Rule and Rule 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

21. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

22. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

23. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

25. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

28. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

29. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

30. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

33. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 30 ppmv @3% O2; or CO: 400 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

5. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

8. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

15. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS


2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c)—A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
9. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9,855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4305, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This unit is approved to operate at the following locations: SW28-T28S-R21E, NE35-27S-20E, and S7-T28S-R21E [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. NOx emissions from this unit shall not exceed any of the following: NOx (as NO2): 30 ppmv @3% O2, or 400 ppmv CO @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

8. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

13. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

15. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

17. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

18. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT: S-1547-120-17

SECTION: SW20  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#147, DIS# 27484-81) WITH O2 CONTROLLER (GEN SITE 121).

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Emissions from this unit shall not exceed any of the following: NOx (as NO2): 30 ppmv @3% O2; or CO: 400 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

6. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

8. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4305. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

15. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-121-21

SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#131, DIS# 28722-83) (CALSO)

PERMIT UNIT REQUIREMENTS

1. Approved locations for this steam generator are: Sec. 12 T30S R21E and Sec. 07 T30S R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

10. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppm @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4305, 5.1and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2520, 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Approved locations for this location are: Sec. 12 T30S R21E and Sec. 13 T30S R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) burned and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

10. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-123-20
SECTION: NE29  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM, SCRUBBER LISTED ON S-1547-77 AND PIPING FORM S-1547-1079, (#133, DIS# 28715-83) (GEN SITE 2972)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

10. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306 and, 5.1 and 4320, 5.2 & 5.4] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: NOx (as NO2): 54.0 lb/day and 7,665 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
20. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081,7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3031, D4084, D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

28. When CVR or TVR gas fired, District-witnessed compliance source testing for PM10 emission rate shall be conducted within 60 days prior to the permit anniversary once every three years, after demonstrating compliance on two consecutive annual source tests. [District Rules 1081 and District Rule 2201] Federally Enforceable Through Title V Permit
29. Emissions of SOx, without regard to any flue gas desulfurization, shall not exceed 70 tons/year. Permittee shall keep accurate annual records of the amount of each type of gas combusted, the sulfur content of each type of gas combusted, and a running total of the uncontrolled SOx emissions. [40 CFR Part 64] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

5. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Caltrans Standard Specifications for paving and materials shall be fully satisfied. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN-COUNTY, CA
10. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 7,665 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1; 4306, 5.3 & 6.1 and 4320, 5.6 & 6.1] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320; 5.8] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by methods specified in this permit. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rules 2201] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.7 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

11. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

12. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
16. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 0.75 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as S02): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

12. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Only PUC quality dry gas shall be utilized as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Natural gas combusted in this unit shall consist primarily of methane and contain less than 5% by weight hydrocarbons heavier than butane. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Natural gas fuel sulfur content shall not exceed 0.75 gr. S/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.004 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 6.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081,7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. {584} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. {585} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. {1686} This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

16. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

17. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

18. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
19. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

21. Approved locations for this equipment: Section 35 (SW quarter), T28S, R21E; and Section 26 (SE quarter), T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Emission rates shall not exceed any of the following: NOx (as NO2): 0.036 lb/MBtu or 30 ppmv @ 3% O2, or CO: 47.5 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

25. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

26. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

27. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

28. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

30. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

31. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

33. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

37. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-134-16

SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS, (#167, DIS# 28638-82)

PERMIT UNIT REQUIREMENTS

1. This steam generator is authorized to operate at multiple locations: NE 1/4 Sec 13, T28S, R21E and Anderson-Fitzgerald Lease SE 1/4 Sec 2, T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Natural gas fuel sulfur content shall not exceed 0.75 gr/S/100 scf. [District Rules 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1.] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
8. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, NOx (as SO2): 4.7 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

12. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

13. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by methods specified in this permit. [District Rule 2520; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c(e)). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

8. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


11. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including vapor recovery gas, produced gas, and purchased gas. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

17. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC (as VOC): 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

22. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

33. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

34. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-142-25
SECTION: 26  TOWNSHIP: 29S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND SHARED SO2 SCRUBBER LISTED ON S-1547-141, (#127 DIS# 28603-81) (A/F DEHY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

8. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


11. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit
22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10:
0.058 lb/MMBtu, SOx (as S02): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15
ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1, and 4306, 5.1] Federally Enforceable
Through Title V Permit

23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per
hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11
pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or
0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable
Through Title V Permit

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring
shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring.
Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the
last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the
allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as
possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed
the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District
within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of
conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The
permittee must then correct the violation, show compliance has been re-established, and resume monitoring
procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended
December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and
testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions
representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either
taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out
over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title
V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2
concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of
exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken
to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable
Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no
determination of compliance shall be established within two hours after a continuous period in which fuel flow to the
unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306.
For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time
after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally
Enforceable Through Title V Permit
29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2201 and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, 6.1; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

34. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, District Rules 1070; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

36. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by methods specified in this permit. [District Rule 2520, 9.4; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


11. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including vapor recovery gas, produced gas, and purchased gas. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

17. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

22. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

29. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

30. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit
31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.4; 2520, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

37. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-144-27: Sep 20 2011 12:15PM - GOUGH
8. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


12. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including vapor recovery gas, produced gas, and purchased gas. [District Rule 2201] Federally Enforceable Through Title V Permit

17. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

18. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit
23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

24. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 94.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.4] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.4; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320] Federally Enforceable Through Title V Permit

36. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 and the NOX and CO concentrations shall be corrected to 3% O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. If the NOx and CO concentration corrected to 3% O2, as measured by the reportable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE.

These terms and conditions are part of the Facility-wide Permit to Operate.
20. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081,6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

30. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grams of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit

5. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

6. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1; 4306, 5.3 & 6.1 and 4320, 5.6 & 6.1] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.015 lb/MMBtu, SOx (as SO2): 0.030 lb/MMBtu, VOC:0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2 & 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: NOx (as NO2): 54.0 lb/day or 7665 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

11. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

13. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2201 and District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

17. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

21. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

25. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, District Rules 1070, 4.0; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AEFtA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1541-146-20: Sep 29 2011 12:49PM - DCG10D
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 30 ppmv @3% O2, or 400 ppmv CO @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

6. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

8. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
9. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

10. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

12. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

15. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

16. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

18. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. This generator is approved to operate at the following locations: Sec. NE12, T30S, R21E and Sec. NW18, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of uncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on uncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dd (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
9. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

10. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

14. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.2] Federally Enforceable Through Title V Permit

18. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This generator is approved to operate at the following locations, SW Sec. 35, T28S, R21E, Sec. 06, T28S, R20E and
SE Sec. 26, T29S, R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201]
Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of
quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount
and type(s) of fuel combusted and all dates on which unit is fired on any noncertified fuel and record specific type
of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel
testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly
testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
anual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 3031, D 4084, D23246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rules 4305, 6,2 and 4306, 6,2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4035, 6,2 and 4036, 6,2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
[District Rule 2520, 13,2] Federally Enforceable Through Title V Permit
9. Duration of start-up and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

10. Duration of refractory curing shall not exceed 30 hours each per occurrence. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

12. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 5.5 and and 4306, 5.5] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-158-15
EXPIRATION DATE: 03/31/2007

SECTION: V TOWNSHIP: V RANGE: V
EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND A FLUE GAS RECYCLING (FGR) SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#155, DIS# 33303-89) (CALSO)

PERMIT UNIT REQUIREMENTS

1. This generator is approved to operate at the following locations: Sec. NE12, T30S, R21E and Sec. 34, T30S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Natural gas fuel sulfur content shall not exceed 1.8 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.005 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

10. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

11. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance, [District Rule 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

23. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-164-17
SECTION: SW35  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER AND FLUE GAS
RECIRCULATION; APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (KENDON 51)

PERMIT UNIT REQUIREMENTS

1. This generator is approved to operate at the following locations, NE Sec. 35, T32S, R23E; Sec. 08, T32S, R21E and
   SW Sec. 35, T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201]
   Federally Enforceable Through Title V Permit
3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit
4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
   Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally
   Enforceable Through Title V Permit
6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
   the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
   ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V
   Permit
8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements
   of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
   [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Natural gas fuel sulfur content shall not exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as S02): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as S02): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
Permit Unit Requirements for S-1547-164-17 (continued)

18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 4.0 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 b/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per • hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.070 lb/MMBtu, SOx (as SO2): 0.092 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 105.0 lb/day, SOx (as SO2): 138.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

10. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rule 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

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18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

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27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


17. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
23. If FOR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FOR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FOR rate based on parameters established during initial compliance source testing. If FOR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack 02 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

24. Permittee shall monitor and record the stack concentration of NOx, CO, and 02 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

37. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following: PM10; 0.008 lb/MMBtu, SOx (as SO2); 0.003 lb/MMBtu, VOC; 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2; or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305] Federally Enforceable Through Title V Permit

5. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Steam generator firebox convection section and all flue gas ductwork shall be maintained to minimize emissions to the atmosphere. [District Rule 2201]

7. Steam generator shall be equipped with O2 controller. [District Rule 2201] Federally Enforceable Through Title V Permit

8. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only PUC-quality natural gas shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit
11. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4305, 5.4] Federally Enforceable Through Title V Permit

14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit

17. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4305, 5.5] Federally Enforceable Through Title V Permit
Permit Unit Requirements for S-1547-179-22 (continued)

20. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0 and 4305, 6.1] Federally Enforceable Through Title V Permit

21. All records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following: PM10; 0.008 lb/MMBtu, SOx (as SO2); 0.003 lb/MMBtu, VOC; 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2; or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305] Federally Enforceable Through Title V Permit

5. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule]

6. Steam generator firebox convection section and all flue gas ductwork shall be maintained to minimize emissions to the atmosphere.

7. Steam generator shall be equipped with O2 controller.

8. Only PUC-quality natural gas shall be used as fuel.

9. Compliance testing shall be conducted annually or as required by the District-approved plan.

10. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]

11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

12. The permittee shall maintain records of fuel usage for each day of operation, in the format approved by the District.

13. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-190-21

SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER, FLUE GAS RECIRCULATION, VAPOR RECOVERY PIPING FROM S-1135-21, AND APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (BUENA FE #6, DIS# 4624-82)

PERMIT UNIT REQUIREMENTS

1. Approved locations for this steam generator are: NE22 32S 23E, SW22 T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201]
   Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.034 lb/MMBtu, SOx (as SO2): 0.220 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
17. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit
8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10:
0.015 lb/MMBtu, SOx (as SO2): 0.066 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15
ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable
Through Title V Permit

9. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour,
or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds
sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14
pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable
Through Title V Permit

10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable emission monitor that meets District specifications.
Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in
the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started
solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has
been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V
 Permit

11. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable
emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but
no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the
following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a
source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4
and 4306, 5.4] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2
concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of
exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken
to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable
Through Title V Permit

13. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four
to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall
monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual
tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306,
5.2] Federally Enforceable Through Title V Permit

14. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas
incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through
Title V Permit

15. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative
of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be
established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or
longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of
permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit
reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable
Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
16. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

18. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

20. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

23. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. (65) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

9. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.015 lb/MMBtu, SOx (as SO2): 0.066 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

13. If NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
16. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

19. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]

7. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2.1 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as S02): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as S02): 80.6 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

31. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080]

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]

7. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Upon recommencing operation, when complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. Upon recommencing operation, when complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

14. Upon recommencing operation, emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as SO2): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Upon recommencing operation, emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Upon recommencing operation, emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, VOC: 4.2 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Upon recommencing operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]

7. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as S02): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
20. If either NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

*PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE*
29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

31. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]

7. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as S02): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
20. If either NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

PERMIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
29. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

30. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of startup, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit
8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.015 lb/MMBtu, SOx (as S02): 0.066 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup, shutdown or refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as S02, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

11. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

12. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.2 and 4306, 5.2] Federally Enforceable Through Title V Permit

14. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

15. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
16. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

18. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-250-21

SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MM BTU/HR DANIEL INDUSTRIES NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS, (#153, DIS# 33747-90)

PERMIT UNIT REQUIREMENTS

1. Approved locations for this steam generator are: SW20 T28S R21E, Sec. 08 T32S R23E and SE26 T29S R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

12. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-355-19
SECTIOM: V TOWNSHIP: V RANGE: V
EXPRIATION DATE: 05/31/2007
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit
5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit
6. [4565] Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070]
8. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This steam generator is approved to operate at the following locations: Sec. NE35, T27S, R20E and Sec. 28, T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and Rule 4306, 5.1] Federally Enforceable Through Title V Permit

8. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

9. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

10. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

11. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit
12. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

13. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

14. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 1081] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

16. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

17. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

18. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (Ib/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (Ib/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

20. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This steam generator is approved to operate at the following locations: Sec. NE35, T27S, R20E; Sec. 28, T28S, R21E; Sec. NW35, T12N, R24W and SE35, T12N, R24W. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

6. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 15 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

7. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
10. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

11. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

12. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

13. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

14. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

16. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

17. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-361-16

SECTION: 12  TOWNSHIP: 30S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (#150, DIS# 39562-88) (CALSO)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct for such modifications, except for changes specified in the conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. This unit may be designated as a dormant emissions unit or an active emissions unit. Upon redesignation, permittee shall provide a written notification (US mail, fax or email) to the District's Compliance Division. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. While dormant, normal source testing, fuel sulfur certification, and monitoring shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Upon recommencing operation of this unit, normal source testing and monitoring shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1080] Federally Enforceable Through Title V Permit

8. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

15. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once each month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
19. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

12. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

14. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

15. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

17. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

19. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

20. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

21. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit
22. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

24. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

29. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2 and 4305, 6.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. This requirement shall not supersede a more stringent NSR or PSD permit testing requirement. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

13. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

14. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

15. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

16. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

20. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
21. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

22. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

23. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

25. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 6.1 and 4305, 6.2] Federally Enforceable Through Title V Permit

30. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2201 and 4305, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Duration of start-up and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

7. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.7] Federally Enforceable Through Title V Permit

12. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10 b or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

22. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart D (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

8. Maximum annual heat input of the unit shall not exceed 3,041 billion Btu per calendar year. [District Rules 2201, 4305 and 4306, 5.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Natural gas fuel sulfur content shall not exceed 2.8 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.02 lb/MMBtu or 27 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306, 5.7] Federally Enforceable Through Title V Permit

12. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

8. Maximum annual heat input of the unit shall not exceed 30,000,000 Btu per calendar year. [District Rules 2201, 4305 and 4306, 5.1] Federally Enforceable Through Title V Permit
9. Natural gas fuel sulfur content shall not exceed 2.8 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.02 lb/MMBtu or 27 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 4405, 5.1] Federally Enforceable Through Title V Permit

11. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306, 5.7] Federally Enforceable Through Title V Permit

12. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

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15. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permitee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-697-22
SECTION: SW01  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR, EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1A, DIS# 28617-82)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The concentration of sulfur compounds in the exhaust from this unit shall demonstrate compliance using one of the following: test the sulfur content of each fuel source or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 5.7 and 5.2] Federally Enforceable Through Title V Permit

8. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; and 4320, 6.2.1] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201 and Rule 4320, 5.4] Federally Enforceable Through Title V Permit

14. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2 and PSD SJ 78-11] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306,5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3, 4306, 6.3, and 4320, 6.3] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5, 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2, and 4320, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5; and 4320, 5.8] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1, 4306, 6.1, and 4320, 6.1] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

36. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

37. Formerly S-1511-7

38. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall conduct annual performance tests for SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. Performance tests for SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

14. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

15. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

16. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.3.2, 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. Emissions rates shall not exceed any of the following: PM-10 0.005 lb/MMBtu, SO2 0.002 lb/MMBtu, NOx 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC 0.003 lb/MMBtu, and CO 1.3 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
20. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The acceptable settings for the flue gas recirculation valve shall be established by testing emissions from this unit or other representative units as approved by the District. The acceptable settings shall be those for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. The flue gas recirculation valve settings shall be inspected at least on a weekly basis. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of the date and time of flue gas recirculation valve settings, and the observed setting. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve setting to within the acceptable range. These records shall be retained at the facility for a period of no less than 2 years and shall be made available for District inspection upon request. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. If the flue gas recirculation valve setting deviates from the acceptable range, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the flue gas recirculation valve settings are not corrected promptly, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits at the observed flue gas recirculation valve settings. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 6.1, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

29. Formerly S-1511-32 [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-722-11
SECTION: SW01 TOWNSHIP: 29S RANGE: 21E
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A GIDEON LOW ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) (#1-1C, BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: PM10: 0.005 lb/MMBtu, SOx (as S02): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed any of the following limits: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following limits: PM10: 7.3 lb/day, SOx (as S02): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1, 4306, 5.3 & 6.1 and 4320, 5.6 & 6.1] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

28. Formerly S-1511-47
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. If Rule 4320 fee option is selected, permittee shall provide to the District at least (7) calendar days advance notice and pay the applicable fees prior to recommencing operation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

7. If Rule 4320 fee option is not selected, this unit shall not be re-started unless it has been tuned or retrofitted to meet the applicable Rule 4320 NOx limit. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2.1] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.3; 4406, 4.2; 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable
emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but
no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the
following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a
source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305,
5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions
representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either
taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out
over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V
Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2
concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of
exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken
to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable
Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. No determination of compliance shall be established
within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within
30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed
alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions
representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V
Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur
content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated
for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with
fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the
monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all
fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and
performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass
balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District
inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least
once every twelve (12) months (no more than 30 days before or after the required annual source test date). After
demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every
thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of
the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing
frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally
Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District
Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Formerly S-1511-48
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

5. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and 4801.3.1] Federally Enforceable Through Title V Permit

6. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The total gas fired in this unit, on a monthly average, shall be less than 50% PUC quality natural gas (as defined in Rule 4320), by volume. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-725-11: Sep 28 2011 12:48PM — GOQN3D
PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. The permittee shall maintain monthly records of the volume of PUC quality natural gas (as defined in Rule 4320) and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv at 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv at 3% O2. [District Rules 2201; 4305, 5.1, 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.1] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305,6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

28. Formerly S-1511-50

29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCERN — KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

33. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

34. Facility shall conduct annual performance tests for SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

35. Performance tests for SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-726-9

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (#3-2P) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320, 5.7] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2, 5.7] Federally Enforceable Through Title V Permit

12. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Unit shall be equipped with the following: natural gas volume flowmeter, TEOR non-condensible gas volume flowmeter, and continuous operation flue gas oxygen monitor/controller. [District Rule 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

15. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

19. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MBMtu or SOx (as SO2): 0.002 lb/MBMtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801] Federally Enforceable Through Title V Permit

21. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit
24. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

25. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

31. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit
32. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

33. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

39. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 2201, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

40. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

41. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

42. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

43. Note: Formerly S-1511-53
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-727-10
EXPIRATION DATE: 03/31/2007

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A COEN MODEL #QLN-ULN 3.2 LO-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND AN OXYGEN ANALYZER/CONTROLLER (#3-2A) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-727-10: Sep 28 2011 12:19PM - GOUCH

DRAFT
9. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Steam generator shall be operated at no greater than 1,466.7 MMBtu/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 4320, 5.4] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

30. Formerly S-1511-54
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-728-11
EXPIRATION DATE: 06/30/2007

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2B) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4405, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4405, 5.5 & 6.1 and 4306, 5.3 & 6.1] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

24. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis' (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 108, 7.1] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-55
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320, 5.7] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4305, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

30. Formerly S-1511-58

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

12. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 2.1] Federally Enforceable Through Title V Permit

13. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.2 and 6.2] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, emissions from this unit shall not exceed 0.005 lb-PM10/MMBtu [District Rules 2201] Federally Enforceable Through Title V Permit

16. When fired exclusively on natural gas, emissions from this unit shall not exceed 0.002 lb-SOx/MMBtu (as SO2). [District Rules 2201, 4301, 4320, 4406, and 4801] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201] Federally Enforceable Through Title V Permit

20. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5, 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

PERMIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

34. Formerly S-1511-65

35. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-734-11
EXPIRATION DATE: 06/31/2007
SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E
EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LO-NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#3-2L) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MBBtu or SOx (as SO2): 0.002 lb/MBBtu. [District Rules 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MBBtu, NOx (as NO2): 0.018 lb/MBBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MBBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
20. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

30. Formerly S-1511-66
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used: H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit

12. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320] Federally Enforceable Through Title V Permit

13. Emissions from this unit shall not exceed 0.005 lb-PM10/MMBtu. [District Rules 2201, 4201, and 4301] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-SOx/MMBtu (as SO2). [District Rules 2201, 4301, 5.2; 4320, 5.4; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.6] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4.; and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permitte-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.6; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 43055.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1, and 4320, 6.1] Federally Enforceable Through Title V Permit
30. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070, 2201, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

31. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

32. Formerly S-1511-67
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-736-11
SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH NORTH AMERICAN LO-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (BELRIDGE #3-2E)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306. 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081, of three 30-minute test runs for NOx and CO. [District Rules 4305, 5.5, 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

7. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320, 5.2] Federally Enforceable Through Title V Permit

8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
10. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

15. Emissions from this unit shall not exceed 0.005 lb-PM10/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-SOx/MMBtu (as SO2). [District Rules 2201; 4320, 5.4] Federally Enforceable Through Title V Permit

17. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @3% O2, VOC: 0.003 lb/MMBtu or CO: 1.9 ppmv @ 3% O2. [District Rule 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and and 4320, 5.6] Federally Enforceable Through Title V Permit

19. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit.

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit.

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit.

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit.

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit.

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit.

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit.

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit.
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 43055.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070, 2201, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

31. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

32. Formerly S-1511-68
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of uncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

10. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

13. Emissions from this unit shall not exceed 0.005 lb-PM10/MMBtu. [District Rule 220] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-SOx/MMBtu (as SO2). [District Rules 2201, 4320, 5.2] Federally Enforceable Through Title V Permit

15. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.6] Federally Enforceable Through Title V Permit
21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4306, 5.8] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

32. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

33. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Formerly S-1511-69
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-738-9

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2F) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320, 5.4] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

16. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 2201, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

34. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

35. Formerly S-1511-70
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-742-9

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of uncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. {656} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4305, 6.1; 4306, 6.1; and 4320, 6.1] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit

16. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = \{(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing)\}/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

32. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

33. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Formerly S-1511-81

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

16. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

32. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural-gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

33. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Formerly S-1511-82

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-744-10  
EXPIRATION DATE: 09/31/2007

SECTION: SE02  
TOWNSHIP: 29S  
RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS- FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOUR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4301, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District 2201] Federally Enforceable Through Title V Permit

16. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = \{(7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing)\}(24 hr/day). [District Rules 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (I) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested no less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules , 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

34. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Formerly S-1511-83
PERMIT UNIT: S-1547-745-12

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

5. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit

14. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
20. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

32. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Formerly S-1511-84

34. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
43. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c, 60.44g(e) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.030 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rule 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5, 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Formerly S-1511-85

35. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. SOx (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-747-10
EXPIRATION DATE: 06/30/2007

SECTION: SE02    TOWNSHIP: 29S    RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MM BTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPORECOVERY SYSTEM S-1547-359, (#2-3C) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be operated at no greater than 1,466.7 MM BTU hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permitee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

17. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rule 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4305, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.5; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.4 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

34. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Formerly S-1511-86

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
46. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and 4801.3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rules 4320, 3.8 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = [(7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day)]. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201] Federally Enforceable Through Title V Permit

20. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Formerly S-1511-87

35. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
45. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and 4801.3.1] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

15. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

16. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit

17. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day. [District Rules 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081,7.1] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

35. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

36. Formerly S-1511-88

37. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu or VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: VOC: 4.5 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. If Rule 4320 fee option is selected, permittee shall provide to the District at least (7) calendar days advance notice and pay the applicable fees prior to recommencing operation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

7. If Rule 4320 fee option is not selected, this unit shall not be re-started unless it has been tuned or retrofitted to meet the applicable Rule 4320 NOx limit. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

22. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
23. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

24. If periodic monitoring of NOx, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

29. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.x.1] Federally Enforceable Through Title V Permit
31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

37. Note: Formerly S-1511-110
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. If Rule 4320 fee option is selected, permittee shall provide to the District at least (7) calendar days advance notice and pay the applicable fees prior to recommencing operation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

7. If Rule 4320 fee option is not selected, this unit shall not be re-started unless it has been tuned or retrofitted to meet the applicable Rule 4320 NOx limit. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of the three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

35. Note: Formerly S-1511-111
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. If Rule 4320 fee option is selected, permittee shall provide to the District at least (7) calendar days advance notice and pay the applicable fees prior to recommencing operation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

7. If Rule 4320 fee option is not selected, this unit shall not be re-started unless it has been tuned or retrofitted to meet the applicable Rule 4320 NOx limit. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

20. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 200 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit
23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5]

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

35. Note: Formerly S-1511-112
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

16. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1, 4305,6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

28. Note: Formerly S-1511-114
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080]

5. If Rule 4320 fee option is selected, permittee shall provide to the District at least (7) calendar days advance notice and pay the applicable fees prior to recommencing operation. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

8. If Rule 4320 fee option is not selected, this unit shall not be re-started unless it has been tuned or retrofitted to meet the applicable Rule 4320 NOx limit. [District Rule 2080] Federally Enforceable Through Title V Permit

9. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

10. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rule 2201; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070]

30. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 3405, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

38. Note: Formerly S-1511-115
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

10. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown or refractory curing, shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, NOx: 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO 1.3 ppmv @ 3% O2 . [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

15. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit
19. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

22. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

25. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. Note: Formerly S-1511-116

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320, 5.4] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

13. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MM Btu or SOx (as SO2): 0.002 lb/MM Btu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

15. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MM Btu, NOx (as NO2): 0.014 lb/MM Btu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MM Btu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7,495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

32. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Formerly S-1511-117

34. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320, 5.7] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

10. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

11. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

12. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

14. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = 

\[ \frac{(7.0 \text{ lb/day})+(249.2 \text{ lb/day})}{(24 \text{ hr/day})} \times \text{(fraction of total TEOR gas incinerated in this unit during testing)} \] 

[District Rules 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7,495 lb/year, or CO: 44.0 lb/day [District Rules 2201] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit
20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 2201, District Rule 1070] Federally Enforceable Through Title V Permit

32. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

33. NOTE: Formerly S-1511-118
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320, 5.7] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

14. Unit shall be equipped with the following: natural gas volume flowmeter, TEOR non-condensible gas volume flowmeter, and continuous operation flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

16. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

20. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

21. When fired exclusively on natural gas emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

22. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201, and 4301] Federally Enforceable Through Title V Permit

23. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
24. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

25. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day. [District Rules 2201] Federally Enforceable Through Title V Permit

26. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.4; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4; and 4320, 5.7] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5, 4306, 5.5, and 4320, 5.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
32. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320] Federally Enforceable Through Title V Permit

33. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

39. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 2201, District Rule 1070] Federally Enforceable Through Title V Permit

40. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

41. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

42. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

43. Formerly S-1511-119
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10:
0.005 lb/MBtu, SOx (as SO2): 0.002 lb/MBtu, VOC: 0.003 lb/MBtu, NOx (as NO2): 0.018 lb/MBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during refractory curing shall not exceed: particulate matter 10 pounds per hour, or 0.1 grains/dscf; sulfur 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shut-down, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e., the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

12. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
16. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, District Rules 1070, 4.0; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.9; 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

25. Formerly S-1511-1120
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-764-8
SECTIOH: SE35   TOWNSHIP: 12N   RANGE: 24W
EXPIRATION DATE: 08/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (MOCO #804) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10:
0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

11. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

12. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

13. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
16. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, District Rules 1070, 4.0; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

25. Formerly S-1511-121
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-765-8

SECTION: SE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (MOCO #806) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2 and 4406, 4.21] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rules 2080; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Formerly S-1511-122

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0, 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-766-10
EXPIRATION DATE: 08/31/2007

SECTION: NW35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPOUR RECOVERY SYSTEM S-1547-819. (MOCO #604) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

Facility Name: AEFtA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-766-10; Sep 2011 3:06PM - OUGHD
7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1 and 5.2] Federally Enforceable Through Title V Permit

13. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBTu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBTu, NOx (as NO2): 0.018 lb/MMBTu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBTu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBTu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBT. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

30. Formerly S-1511-123
PERMIT UNIT: S-1547-767-10

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN QLN-ULN BURNER AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819 (MOCO #605) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rule 2201 and District Rules 4201, 3.1; 4301, 5.1, 5.2.1, and 5.2.3] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Formerly S-1511-124
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-768-11
SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION AND PIPING FROM TEO/R WELL VENT VAPOR RECOVERY SYSTEM S-1547-819. (MOCO #606) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

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Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Formerly S-1511-125
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-769-11
EXPIRATION DATE: 06/31/2007
SECTION: NW35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH FLUE GAS
RECIRCULATION AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819. (MOCO #607)
(SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District
Rule 2201] Federally Enforceable Through Title V Permit
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 68 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Formerly S-1511-126
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emissions from this unit, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: NOx (as NO2): 0.018 lb/MMBTU or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBTU or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBTU on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBTu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. PM-10 emissions from the combustion of natural gas in this permit unit shall not exceed 0.005 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Sulfur compound emissions (as SO2) from the combustion of natural gas in this permit unit shall not exceed 0.002 lb/MM Btu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 5.4 and 4306, 4.5] Federally Enforceable Through Title V Permit

20. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

21. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Formerly S-1511-127
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-771-11 Sep 29 2011 3:08 PM - GOUGHD

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4303, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. Formerly S-1511-128
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-772-11

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPOUR RECOVERY SYSTEM S-1547-819. (MOCO #702) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on non-certified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. Formerly S-1511-129
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-777-11

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819. (MOCO #505) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

8. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 0.034 lb/MMBtu or 28 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu or CO: 1.9 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

13. PM-10 emissions from the combustion of natural gas in this permit unit shall not exceed 0.005 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Sulfur compound emissions (as SO2) from the combustion of natural gas in this permit unit shall not exceed 0.002 lb/MM Btu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305, 5.4 and 5.4] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305, 6.1 and 6.1] Federally Enforceable Through Title V Permit
22. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

26. All units in a group for which representative units are source tested to measure NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

27. All units in a group for which representative units are source tested to measure NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

28. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

32. Formerly S-1511-134
PERMIT UNIT: S-1547-778-11
SECTION: NW3S TOWNSHIP: 12N RANGE: 24W
EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A GIDEON MODEL MGW-63R1 LOW NOX BURNER, FLUE GAS RECIRCULATION AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819, MOCO (#506) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBTu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBTu, NOx (as NO2): 0.0146 lb/MMBTu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBTu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBTu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBTu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 7994 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

30. Formerly S-1511-135
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h)) and 60.48c. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SO2 (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. Formerly S-1511-136
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201; PSD SJ 89-01] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SO2 (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERR ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

S-1547-780-11: Sep 30 2011 13:36PM - DGUGK2
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Visible emissions shall not exceed a Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
44. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Note: Formerly S-1511-137
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-781-11

SECTION: NW35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819, (MOCO #705) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201; PSD SJ 89-01] Federally Enforceable Through Title V Permit

9. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Visible emissions shall not exceed a Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
44. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Note: Formerly S-1511-138
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2.1] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4.0; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 4306] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
29. Note: Formerly S-1511-140
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-783-10
SECTION: NW11 TOWNSHIP: 29S RANGE: 21E
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBT UhR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN ULTRA LOW NOX BURNER
AND FLUE GAS RECIRCULATION (#11-1B) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
an annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally
Enforceable Through Title V Permit

8. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam
generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERIV-COUNTY, CA
9. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4.0; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
29. Note: Formerly S-1511-141
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being burned in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.4; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. Note: Formerly S-1511-142
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permitee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

19. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be daily. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.3 and 4306, 5.3] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1, 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
29. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

30. Note: Formerly S-1511-143
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as S02): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 6.2; 4306, 6.2] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed the following: PM10: 7.3 lb/day, SOx (as S02): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.6 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
29. Note: Formerly S-1511-144
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-787-7

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE VAPOR PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (#401A) (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.7] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 6.1] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.5; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

17. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If the NOX and/or CO concentrations, corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

28. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

29. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

30. Formerly S-1511-149
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-788-7

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE VAPOR PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (#401B) (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.34.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.4.2, 4301, 5.2 and 4801.3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

16. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas incinerated in this unit during testing)/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

17. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
21. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. All records required by this permit shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

30. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

31. Formerly S-1511-149

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensable gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

15. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406,4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320. 6.3] Federally Enforceable Through Title V Permit

25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081,6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 2201,4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

30. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

31. Formerly S-1511-150

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. [565] Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

15. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.6] Federally Enforceable Through Title V Permit

24. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588.

\[\text{District Rules 1081,6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2}\] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.

\[\text{District Rules 4305, 5.5; 4306, 5.5 and 5.8}\] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request.

\[\text{District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1}\] Federally Enforceable Through Title V Permit

32. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

33. Formerly S-1511-151
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-791-7
EXPIRATION DATE: 05/31/2007

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULN BURNER,
A FLUE GAS RECIRCULATION (FGR) SYSTEM, AND A NON-CONDENSIBLE PIPING FROM VAPOOR CONTROL
SYSTEM S-1547-714. (#401E) (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of
quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount
and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type
of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel
testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly
testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally
Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-791-7: Sep 26 2011 4:28PM - OCUD4D
8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

16. VOC emission rates shall not exceed 0.003 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

17. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day)/(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.6] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4, 4320, 5.7] Federally Enforceable Through Title V Permit

23. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5,; and 4320, 5.8] Federally Enforceable Through Title V Permit

28. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 1B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

32. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201, 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

34. Formerly S-1511-152
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

3. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

8. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

9. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7 and 6.1] Federally Enforceable Through Title V Permit

10. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
11. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4301, 5.2; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

12. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing)}/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

14. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rules 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

19. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

28. Formerly S-1511-153
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-793-8

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR (401G) WITH NORTH AMERICAN LO-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714 - LOST HILLS 2 LEASE

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 6.2; 4306, 6.2 and 4320, 6.2.1] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

7. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum TEOR gas flowrate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERAG ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
10. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7 and 6.1] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu or CO: 6 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

16. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rules 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. Permittee shall perform District-witnessed or -approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District Rule 2201] Federally Enforceable Through Title V Permit
31. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District Rule 2201]

32. Note: Formerly S-1511-154
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flowrate for this unit shall not exceed 610,800 cubic feet per day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly record of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7 and 6.1] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4301, 5.2; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

18. Permittee shall perform District-witnessed or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rule 1070 and 4320, 5.2] Federally Enforceable Through Title V Permit

31. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District Rule 2201] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201, District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District Rule 2201]

34. Formerly S-1511-155
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flowrate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 4306, 5.1and 4320, 5.2] Federally Enforceable Through Title V Permit

15. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day) x(fraction Of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall perform District-witnessed or -approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 4.7] Federally Enforceable Through Title V Permit
21. If either the NO\textsubscript{x} or CO concentrations corrected to 3% O\textsubscript{2}, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NO\textsubscript{x}, CO, and O\textsubscript{2} measurements, (2) the O\textsubscript{2} concentration in percent and the measured NO\textsubscript{x} and CO concentrations corrected to 3% O\textsubscript{2}, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.4] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NO\textsubscript{x} and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA
S-1547-795-7, Sep 26, 2011 4:26 PM - GOGHEH
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.14305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

32. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Formerly S-1511-156
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-796-7

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH ONE COEN QLN-ULN LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (401J) (LOST HILLS 2 LEASE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4305, 6.2; and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flowrate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.5] Federally Enforceable Through Title V Permit

15. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lbs/day)+(17.1 lbs/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall perform District-witnessed, or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition.

[District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.14305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

31. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

32. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Formerly S-1511-157
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. {665} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15.0 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4305, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: VOC: 7.2 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. If no source test is conducted, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-166
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-798-10
SECTION: SW14 TOWNSHIP: 31S RANGE: 22E
EXPIRATION DATE: 08/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-822, (SHALE #2) (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
9. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

25. Formerly S-1511-167
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-799-10

SECTION: SW14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH COEN ULN LOW NOX BURNER, NON-CONDENSABLE PIPING FROM VAPOUR CONTROL SYSTEM S-1547-822 AND FLUE GAS RECIRCULATION (FGR) SYSTEM (SHALE #3) (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: VOC: 7.5 lb/day, NOx (as NO2): 51 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOx, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

29. Formerly S-1511-168
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as S02. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. Compliance with fuel conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu or CO: 40 ppmv @ 3% O2. [District Rule 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.5] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

27. Formerly S-1511-169
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-801-10
EXPIRATION DATE: 06/30/2007

SECTION: SE14 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-822, (SHALE #6) (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, \( \text{SO}_x \) (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, \( \text{NO}_x \) (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% \( O_2 \), or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% \( O_2 \). [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% \( CO_2 \); sulfur - 200 pounds of \( SO_2 \) per hour, or 2000 ppmv as \( SO_2 \), or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; \( NO_2 \) - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: VOC: 7.5 lb/day, \( \text{NO}_x \) (as NO2): 51.0 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of \( \text{NO}_x \), CO, and \( O_2 \) at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. If the \( \text{NO}_x \) or CO concentrations corrected to 3% \( O_2 \), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of \( \text{NO}_x \), CO, and \( O_2 \) measurements, (2) the \( O_2 \) concentration in percent and the measured \( \text{NO}_x \) and CO concentrations corrected to 3% \( O_2 \), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4305, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year: Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

28. Formerly S-1511-171

29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Visible emissions shall not exceed « Ringelmann or 10% opacity. ['PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with an operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

9. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

13. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 5.7 and 6.2] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu or CO: 1.9 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

17. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

22. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

24. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

27. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

28. Formerly S-1511-172
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-803-9
EXPIRATION DATE: 08/31/2007

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LO-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (BELRIDGE #3-20)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

5. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

9. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7 and 6.1] Federally Enforceable Through Title V Permit

11. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

12. Except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing)}/(24 hr/day). [District Rule 2201;4201, 3.0 and 4301, 5.2] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rule 2201, 4305, 5.1; 4306, 4.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 46.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.6] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

28. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

29. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

30. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Formerly S-1511-181
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. This unit shall only be fired on natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Maximum heat input to steam generator shall not exceed 1,440 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4201, 3.0; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates, including startup, shutdown, and refractory curing, shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9.461 lb/year, CO: 43.2 lb/day, PM10: 7.2 lb/day, or SOx: 2.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NO\textsubscript{x} and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NO\textsubscript{x} (ppmv) - EPA Method 7E or ARB Method 100, NO\textsubscript{x} (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H\textsubscript{2}S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NO\textsubscript{x} emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NO\textsubscript{x} emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

28. Note: Formerly S-1511-185
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201; PSD SJ 89-02] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performance of the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
18. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4305, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

27. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

28. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
29. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

30. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

31. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

32. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Field gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

Formerly S-1511-186
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-806-10  
EXPIRATION DATE: 06/31/2007

SECTION: SE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN BURNER, WITH FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPORECOVERY SYSTEM S-1547-822, (FINLEY #10) (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be equipped with an operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201; PSD SJ 89-02] Federally Enforceable Through Title V Permit

11. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.5 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 200 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. PM-10 and SO2 daily emission limits, when unit incinerates scrubbed non-condensible gas, shall be quantified on the mass balance basis on permit S-1547-822 for all steam generators authorized to incinerate scrubbed non-condensible gas. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2201 and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
30. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

31. Formerly S-1511-187

32. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Visible emissions shall not exceed « Ringelmann or 1% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
46. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. This steam generator is also approved to operate at SW/4 Sec. 01, T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Unit shall be equipped with natural gas volume flowmeter and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

7. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be fired with natural gas or field gas, with sulfur content (as H2S) not to exceed 15 ppmv. [District Rules 2201; 4301, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SO2 - 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4301, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed any of the following: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

28. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Permittee shall maintain daily records of fuel type, annual fuel sulfur analyses and daily volumes of fuel gas fired in this steam generator. [District Rules 1070 and 2204] Federally Enforceable Through Title V Permit
31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

32. Note: Formerly S-1511-188 [District Rule 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

2. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

5. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10 - 0.005 lb/MMBtu; SOx (as SO2) - 0.002 lb/MMBtu; VOC - 0.003 lb/MMBtu; NOx (as NO2) - 0.014 lb/MMBtu or 12 ppmv @ 3% O2; or CO - 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District Rule 2201 and District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10 - 7.5 lb/day; SOx (as SO2) - 3.0 lb/day; VOC - 4.5 lb/day; NOx (as NO2) - 51.0 lb/day or 7665 lb/year; or CO - 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.6] Federally Enforceable Through Title V Permit
10. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

11. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

12. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

13. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

15. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
18. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. 
[District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

19. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. 
[District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. 
[District Rule 2201] Federally Enforceable Through Title V Permit

21. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. 
[District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. 
[Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. 
[District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. 
[District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.1] Federally Enforceable Through Title V Permit

25. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. 
[District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. 
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record all dates on which this unit is fired on any noncertified fuel and record the specific type of noncertified fuel used. 
[District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
28. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306 and 4320, 6.1] Federally Enforceable Through Title V Permit

30. Note: Formerly S-1511-189
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 & 5.2] Federally Enforceable Through Title V Permit


PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/SCF calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.8] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

19. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

26. Formerly S-1511-190
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of
40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements.
[District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally
Enforceable Through Title V Permit

8. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title
V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

28. Formerly S-1511-191
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-811-11
SECTION: SE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOUR CONTROL SYSTEM (MOCO #808) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
43. Visible emissions shall not exceed ½ Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Formerly S-1511-193
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-812-11
EXPIRATION DATE: 06/31/2007

SECTION: SE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS (AND VAPOR RECOVERY GAS) FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN BURNER AND FLUE GAS RECIRCULATION (MOCO #807) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
8. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following limits:
   PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit
28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
43. Visible emissions shall not exceed a Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Formerly S-1511-194

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Maximum TEOR gas flowrate for this unit shall not exceed 610,800 cubic feet per day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 6.1] Federally Enforceable Through Title V Permit

14. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

15. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.1; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Compliance with SOx emission rate for non-TEOR gas shall be demonstrated annually by gas sulfur analysis and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2; 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. Permittee shall maintain accurate records of annual sulfur analyses of and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

31. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District Rule 2201]

34. Formerly S-1511-235
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-826-8
SECTION: SE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
6.25 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-822, (FINLEY #8) (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. [565] Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
8. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedence. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

29. Formerly S-1511-238
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 6.4] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
17. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

18. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

24. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

25. Formerly S-1511-239

26. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

27. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

28. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
29. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

30. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

31. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

32. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Field gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Visible emissions shall not exceed α Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
44. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
PERMIT UNIT: S-1547-828-10  
SECTION: SE14  TOWNSHIP: 31S  RANGE: 22E  
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:  
62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPORECOVERY SYSTEM (FINLEY #12) (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. (S65) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Duration of start-up and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

8. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

10. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

13. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

14. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit
19. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

29. Formerly S-1511-240

30. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
31. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

32. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [Districts 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates, except during refractory curing, shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit
18. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2201 and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

27. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

28. Formerly S-1511-241

29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
45. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-830-7

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN ULN BURNER, A FLUE GAS RECIRCULATION (FGR) SYSTEM, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE VAPOR PIPING FROM VAPOR CONTROL SYSTEM S-1547-714, (401K) (LOST HILLS 2 LEASE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum TEOR gas flowrate for this unit shall not exceed 610.8 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 6.1] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.3] Federally Enforceable Through Title V Permit

15. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

17. Compliance with SOx emission rate for non-TEOR gas shall be demonstrated annually by gas sulfur analysis and mass balance calculations. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Permittee shall perform District-witnessed, or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

28. Permittee shall maintain accurate records of annual sulfur analyses of and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

29. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

30. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District Rule 2201] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

33. Formerly S-1511-244
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-831-12
SECTION: SE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM, (MOCO #809) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District Rule 2201] Federally Enforceable Through Title V Permit

4. When the vapor gas stream is stopped or before starting, the unit may be disconnected or reconnected at the scrubbed vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed or reconnected. Permittee shall keep a written record of the date(s) when the unit is disconnected or reconnected at the scrubbed vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed or reconnected. [District Rule 1080] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

12. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.6 and 4306, 6.3] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

28. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit
29. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

30. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
44. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Formerly S-1511-246
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-832-12
SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C. E. NATCO GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER. (#3-2C, BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

2. Permittee shall submit written notification to the District upon designating the unit as dormant or active. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation of this unit, normal source testing shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

6. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with an operational fuel gas volumetric flow meter and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

14. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

17. Only natural gas or a combination of natural gas and scrubbed non-condensible vapors shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Gas combusted in this steam generator shall not exceed 1,440 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 7.2 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit
24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

25. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

34. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas and TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

37. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

38. Formerly S-1511-247
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-833-12
EXPIRATION DATE: 03/31/2007
SECTION: SW02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C. E. NATCO GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LO-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER (#2-5F) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. No modification to this unit shall be performed without an Authority to Construct (ATC) for such modifications, except for changes specified in the conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 2080, 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 2080, 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

6. This unit may not be operated after the applicable compliance schedule from Rule 4320, unless a valid ATC is implemented that approves the changes allowing this unit to comply with the applicable requirements of Rule 4320. [District Rule 2010] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN-COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rule 2201, 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit
29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

34. Formerly S-1511-248
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-834-10
EXPIRATION DATE: 06/30/2007
SECTION: SE02 TOWNSHIP: 29S RANGE: 21E
EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3I) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. [S565] Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

15. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

16. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

17. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = \((7.0 \text{ lb/day}) \times (249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas gas incinerated in this unit during testing}) / (24 \text{ hr/day})\). [District Rule 2201 and 4201, 3.0] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 3.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 51.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 3.7] Federally Enforceable Through Title V Permit
23. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

34. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. 

35. Formerly S-1511-249
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District rule 2201] Federally Enforceable Through Title V Permit

7. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods (or other approved methods listed in this permit) H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. A separate H2S is not required if results of Total Sulfur test demonstrates compliance with applicable H2S limits. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rule 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320, 5.4] Federally Enforceable Through Title V Permit

15. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, and 4320, 5.4] Federally Enforceable Through Title V Permit

16. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201 and 4201, 3.0] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 49.9 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1; 4320, 6.1] Federally Enforceable Through Title V Permit

33. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

34. Formerly S-1511-250
PERMIT UNIT: S-1547-836-12

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

7. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using test methods specified in this permit. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used: H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rule 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

14. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = \{(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing)\}/(24 hr/day). [District Rules 2201 and 4201, 3.0] Federally Enforceable Through Title V Permit

15. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District Rule 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

20. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

29. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

30. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit
31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Sample collection for compliance demonstration (source testing) shall be by an ARB certified testing laboratory and shall be District witnessed or authorized. [District Rule 1081] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

34. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas. [District Rule 2201, District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

35. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

36. Formerly S-1511-253
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

5. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

6. (565) Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with operational vapor control system gas supply volumetric flow meter whenever unit is connected to the vapor control system gas supply. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 4201, 3.0; and 4320, 5.4] Federally Enforceable Through Title V Permit

11. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.2] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the test methods specified in this permit. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used: H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District Rule 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4201, 3.0; 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

18. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 5.7] Federally Enforceable Through Title V Permit
20. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 5.7] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.7] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.5] Federally Enforceable Through Title V Permit

29. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District Rule 4320, 5.2] Federally Enforceable Through Title V Permit

30. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 4320] Federally Enforceable Through Title V Permit

31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Sample collection for compliance demonstration (source testing) shall be by an ARB certified testing laboratory and shall be District witnessed or authorized. [District Rule 1081] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

34. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas. [District Rule 4320, District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

35. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

36. Formerly S-1511-253
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits:
    PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rule 2201; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2; and 4801, 3.1] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
18. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

24. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201 and District Rules 1070; 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

26. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

27. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

28. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
29. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

30. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Any relaxation in the District’s Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
44. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Formerly S-1511-379
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District Rule 2204] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rule 2201 and District Rules 2520, 9.1; 4201, 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit

11. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4, and 4306, 5.4] Federally Enforceable Through Title V Permit

15. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4, and 4306, 5.4] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2, and 4306, 5.4.2] Federally Enforceable Through Title V Permit

17. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306, 6.3] Federally Enforceable Through Title V Permit
18. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, S0x (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5, and 4306, 5.5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 2201 and District Rules 1070; 2520; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

26. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

27. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
28. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

29. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

30. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCILISE4IN — COUNTY, CA
61-817-686-12 Sep 27 2011 12 SOPM — GOUGHO

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

Formerly S-1511-380
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the fuel sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational natural gas volumetric flow meters. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201; PSD SJ 89-01] Federally Enforceable Through Title V Permit
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1 and 4306, 5.1] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 4.5 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SO2 (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 6.1; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

23. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and Rule 4320, 6.1] Federally Enforceable Through Title V Permit

25. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320, 5.1 and 5.3] Federally Enforceable Through Title V Permit

26. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

27. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
28. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

29. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

30. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

31. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr) and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements, ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
42. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. NOTE: Formerly S-1511-378
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1034-9
SECTION: NW11 TOWNSHIP: 29S RANGE: 21E
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A FLUE GAS RECIRCULATION (#11-1I) (BELRIDGE) WITH A COEN MODEL QLN-ULN LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. {565} Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Natural gas fuel sulfur content shall not exceed 0.47 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.4] Federally Enforceable Through Title V Permit

8. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.0013 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 2.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 432, 5.8] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

4. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. Natural gas fuel sulfur content shall not exceed 0.47 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320, 3.7 and 5.4] Federally Enforceable Through Title V Permit

8. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320, 6.2] Federally Enforceable Through Title V Permit
9. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.0013 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201; 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

10. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

11. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 2.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 432, 5.8] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit
17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

22. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

24. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1059-6
PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

EXPIRATION DATE: 05/31/2007

SECTION: NW13  TOWNSHIP: 26S  RANGE: 20E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR GAS-FIRED NATIONAL STEAM GENERATOR (HSG #180; DIS# 20616-81) WITH NORTH AMERICAN BURNER (TAYLOR LEASE)

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. No modification to this unit shall be performed without an ATC for that modification except as described in condition 3 below. [District Rule 2010] Federally Enforceable Through Title V Permit
5. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit
6. Operators shall notify the District at least seven (7) calendar days prior to recommencing operation of a compliant DEU. [District Rule 2080] Federally Enforceable Through Title V Permit
7. A source test to demonstrate compliance with the indicated emissions limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 2080, 4305, 6.3; 4305, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit
8. In accordance with the provisions of Rule 4305 Section 7.4, amended 12/19/96, this unit may only be operated after the permittee has submitted an application for Authority to Construct for any modification necessary to comply with Rule 4305. [District Rule 2010 and 4305]
9. All combustion equipment (burner, combustion air controls, etc.) shall be operated and maintained as intended by manufacturer. [District Rule 2080] Federally Enforceable Through Title V Permit
10. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2080] Federally Enforceable Through Title V Permit
11. {287} When gas firing, compliance source testing for fuel gas sulfur content shall be conducted annually (or as approved by the District) within 60 days prior to the permit anniversary. [District Rule 1070]
12. The sample collection shall be conducted under conditions (fuel quality, firing rate, waste gas incineration, air fuel ratio, etc.) expected to result in emissions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit
14. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District Rule 2201] Federally Enforceable Through Title V Permit

20. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Emissions assessed to the SLC for this unit are PM10: 9.6 lb/day, SOx (as SO2): 1.1 lb/day, NOx (as NO2): 54.0 lb/day, VOC: 2.9 lb/day, and CO: 6.7 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu, VOC: 0.003 lb/MMBtu, and CO: 0.007 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Emission rates from all permit units in the Western Heavy Oil Source SLC Compliance Plan shall not exceed PM10: 545.6 lb/day, SOx (as SO2): 6,237.6 lb/day, NOx (as NO2): 1,708.6 lb/day, VOC: 59.8 lb/day, and CO: 282.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. This permit unit shall comply with NOx and sulfur compound emission requirements as specified in Rules 4405 and 4406. [District Rules 4405 and 4406] Federally Enforceable Through Title V Permit

25. For any day monitoring provisions fail, the emissions shall be calculated on operational data (steam production rate, inlet air and exhaust gas flowrate, etc) or, if such data is not available, for the four days of operation preceding the breakdown. [District Rule 2201] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.034 lb/MMBTU, SOx (as S): 0.034 lb/MMBTU, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.007 lb/MMBTU, or CO: 50 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

5. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

6. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

7. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

8. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

9. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

10. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

11. The permittee shall keep daily records of the amount of gas combusted, and the date and duration of scrubber operation, for a period of two years, and shall make records available for inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

12. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

14. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

15. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

16. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

17. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.034 lb/MMBTU, SOx (as S): 0.034 lb/MMBTU, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.007 lb/MMBTU, or CO: 50 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

5. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

10. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The permittee shall keep daily records of the amount of gas combusted, and the date and duration of scrubber operation, for a period of two years, and shall make records available for inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

12. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

13. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

17. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1086-6
SECTION: 35  TOWNSHIP: 28S  RANGE: 27E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR OIL-FIRED THERMOTICS STEAM GENERATOR (#11) WITH NORTH AMERICAN LO-NOX BURNER, HAUGE O2 CONTROLLER AND THERMOTICS SO2 SCRUBBER

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit
2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit
3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit
4. Emissions from this unit shall not exceed any of the following: PM10: 2.11 lb/hr, SOx (as S): 0.034 lb/MMBTU, VOC: 0.42 lb/hr, NOx (as NO2): 30 ppmv @3% O2; or CO: 50 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit
5. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2201]
6. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District Rule 2201]
7. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit
11. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall have no detectible leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Unit is authorized to burn TEOR S-1547-1079 gas. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Testing for gas sulfur content shall be conducted no less than monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
15. Compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

16. Compliance with NOx and CO emission limits shall be demonstrated not less than once every 36 months if compliance is demonstrated on two consecutive annual compliance tests. [District Rule 4305] Federally Enforceable Through Title V Permit

17. If permittee fails any compliance demonstration for NOx and CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

18. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The permittee shall keep daily records of the amount of gas combusted, and the date and duration of scrubber operation, for a period of two years, and shall make records available for inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. This equipment shall not be operated for any reason until necessary retrofits are made so that the equipment is in full compliance with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

21. No modification to this unit shall be performed without an Authority to Construct permit for that modification, except for changes specified in Condition #3, below. [District Rule 2201] Federally Enforceable Through Title V Permit

22. All fuel supply lines shall be physically disconnected from this unit. [District Rule 4305] Federally Enforceable Through Title V Permit

23. Emissions from this unit shall not exceed any of the following: 30 ppmv NOx, corrected to 3% oxygen or 400 ppmv CO, corrected to 3% oxygen. [District Rule 4305] Federally Enforceable Through Title V Permit

24. A source test demonstrating compliance with the indicated emissions limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1070] Federally Enforceable Through Title V Permit

25. Fuel oil preheat and atomization equipment shall be operated and maintained as intended by manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Excess combustion air shall be maintained at approximately 2.3% excess O2 by continuous operation of oxygen analyzer/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Fuel oil sulfur content shall not exceed 1.2% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Scrubber liquor pH shall be maintained between 6.0 and 7.5 and shall be continuously monitored. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Steam generator firebox, convection section, and all flue gas ductwork shall be free of visible leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Emission rates shall not exceed the following PM10: 4.56 lb/hr, SOx (as SO2): 3.82 lb/hr, VOC: 2.03 lb/hr, and SO4: 1.70 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1129-845.
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emission rates shall not exceed any of the following limits: PM10: 0.010 lb/MMBTU, SOx (as SO2): 0.002 lb/MMBTU, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBTU, or CO: 400 ppmv @3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

6. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

7. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 0.70 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Note: Formerly S-1129-847. [Note]

12. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1089-8
EXPIRATION DATE: 05/31/2007
SECTION: 15  TOWNSHIP: 27S  RANGE: 19E
EQUIPMENT DESCRIPTION:
62.5 MM BTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL #QLN-ULN ULTRA LOW-NOX BURNER WITH FLUE GAS RECIRCULATION AND SO2 SCRUBBER LISTED ON S-1135-26 (HSG-186)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2201, 2520 Section 9.3.2, and 4320] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.0266 lb/MMBtu, SOx (as SO2): 9 ppmv @3% O2, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1 and 4306, 5.1 4320, 5.2] Federally Enforceable Through Title V Permit
8. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 39.9 lb/day, SOx (as SO2): 23.3 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown (as defined in Rule 4306) shall not exceed 2 hours each per occurrence. [District Rule 4305, 5.5 and 4306, 5.3] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 2080; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

17. When steam generator exhaust is routed through scrubber, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

18. When scrubber is bypassed, fuel gas sulfur content shall not exceed 5 grains of total sulfur per 100 dscf of fuel gas. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit
19. When steam generator exhaust is routed through the scrubber, permittee shall monitor and record scrubber liquor recirculation rate and pH at least once per month. [District Rule 4320, 5.7] Federally Enforceable Through Title V Permit

20. Source testing to demonstrate compliance with SOX emission limits (SOx emission concentration or control efficiency) in this permit shall be conducted annually. Source testing may be deferred if scrubber is bypassed as authorized by this permit. Whenever the unit is switched to scrubbed operation, compliance source testing for SOX shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. Source testing of scrubber exhaust during operation of any one of the steam generators S-1135-26 or S-1547-1089 shall satisfy the testing requirement for this unit. [District Rules 2201 and 4320, 5.7] Federally Enforceable Through Title V Permit

21. Source testing to demonstrate compliance with the PM10 emission limit (lb/MMBtu) included in this permit shall be conducted concurrently with the initial compliance test for SOx and every three years thereafter. Source testing of scrubber exhaust during operation of any one of the steam generators S-1135-26 or S-1547-1089 when firing the maximum available quantity of waste gas shall satisfy the PM10 testing requirement for this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation but no longer than 2 hrs after re-ignition. [District Rules 4305, 5.5; 4306, 5.5, and 4320, 5.8] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5 and 4306, 5.5] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 (lb/scf) - EPA Methods 5, 201A, and 202. [District Rules 1081, 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1129-848. [Note]
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301] Federally Enforceable Through Title V Permit

5. All combustion equipment (burner, combustion air controls, etc.) shall be operated and maintained as intended by manufacturer. [District Rule 2080] Federally Enforceable Through Title V Permit

6. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2080] Federally Enforceable Through Title V Permit

7. When gas firing, compliance source testing for fuel gas sulfur content shall be conducted annually (or as approved by the District) within 60 days prior to the permit anniversary. [District Rule 1070] Federally Enforceable Through Title V Permit

8. The sample collection shall be conducted under conditions (fuel quality, firing rate, waste gas incineration, air fuel ratio, etc.) expected to result in emissions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

9. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080] Federally Enforceable Through Title V Permit

10. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Maximum emission rates for permit unit shall not exceed PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu, VOC: 0.003 lb/MMBtu, and CO: 0.007 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

14. This permit unit shall comply with NOx and sulfur compound emission requirements as specified in Rules 4405 and 4406. [District Rules 4405 and 4406] Federally Enforceable Through Title V Permit

15. For any day monitoring provisions fail, the emissions shall be calculated on operational data (steam production rate, inlet air and exhaust gas flowrates, etc) or, if such data is not available, for the four days of operation preceding the breakdown. [District Rule 2201] Federally Enforceable Through Title V Permit

16. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4701] Federally Enforceable Through Title V Permit

17. Formerly S-1141-436-1
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1142-7

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-55-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or 5840 lb/yr or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.2.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOx, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit
18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit

19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or 5840 lb/yr, or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1072, 2201 and 2530, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOX, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing to maintain ongoing compliance documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NOx - 1400 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or 5840 lb/yr or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.2.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

12. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

17. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
18. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

23. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

25. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1145-3

EXPIRATION DATE: 09/30/2007

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85 GLE BURNER AND
FGR APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S,
   R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance
   with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation.
   [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rules 2201 and 4320, 5.4] Federally
   Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory
   curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a
   shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not
   exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and
   refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V
   Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following:
   PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District
   Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per
   hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11
   pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or
   0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through
   Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day,
   NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule
   2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
    sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
    ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans
    performed in the laboratory. [District Rules 1070, 2201 and 4320, 9.4.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.2.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO or O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rules 2080, 4305, 6.1. 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1146-3

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4234-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS.

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rules 2201 and 4320, 5.4] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 4520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.2.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO or O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rules 2080, 4305, 6.1. 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2620,9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOX, CO or O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rules 2080, 4305, 6.1. 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1148-3

EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-55-GLE BURNER AND FGR APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS.

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 3520, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO or O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rules 2080, 4305, 6.1. 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2620, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rules 2080, 4305, 6.1. 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4305, 5.5; 4306, 5.3 and 4320, 5.6] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 5.1; 4306, 5.1 and 4320, 5.2] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2; 4405, 5.2; 4406, 4.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

14. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

15. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4; 4306, 5.4 and 4320, 5.7] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

18. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081, 7.2] Federally Enforceable Through Title V Permit
19. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3; 4306, 6.3 and 4320, 6.3] Federally Enforceable Through Title V Permit

20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5; 4306 and 4320, 5.5] Federally Enforceable Through Title V Permit

21. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 6.1; 4305, 6.2; 4306, 6.2 and 4320, 6.2] Federally Enforceable Through Title V Permit

23. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5; 4306, 5.5 and 4320, 5.8] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records available for District inspection upon request. [District Rules 2080, 4305, 6.1. 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit

27. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4.0; 4305, 6.1; 4306, 6.1 and 4320, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rules 2201] Federally Enforceable Through Title V Permit

8. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.7 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The duration of start-up and shutdown (as defined in Rule 4307) shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least twice each calendar year, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rules 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of the duration of each start-up, and shutdown that exceed one hour per occurrence for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-252-10  
EXPIRATION DATE: 06/30/2007

SECTION: 16  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:  
NATURAL GAS-FIRED TRICO SUPERIOR HEATER TREATER WITH A 4.2 MMBTU/HR MAXON MODEL M-PAKT  
NATURAL GAS-FIRE BURNER (LOCKWOOD DEHY)

PERMIT UNIT REQUIREMENTS

1. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rules 2201, 4301 and 4801] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, and 4307, 5.1] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rules 2201, 4301 and 4801] Federally Enforceable Through Title V Permit

8. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4301 and 4801] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates shall not exceed any of the following: PM10: 0.8 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.6 lb/day, NOx (as NO2): 20.2 lb/day or 1325 lb/year, or CO: 16.9 lb/day or 1361 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

13. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at twice each calendar year, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rules 4307, 6.1] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

18. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rules 220, 4301 and 4801] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rules 2201, 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

8. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4301 and 4801] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
9. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.7 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least twice each calendar year, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to ensure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rules 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-664-8
SECTION: SW16  TOWNSHIP: 32S  RANGE: 23E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
HEATER TREATER #V-204 (LOCKWOOD DEHY) WITH A 240 BBL VESSEL WITH PRESSURE RELIEF VENT TO S-1547-586 OR S-1547-587 AND PERMIT-EXEMPT BURNER (NATURAL GAS-FIRED, 5 MMBTU/HR OR LESS)

PERMIT UNIT REQUIREMENTS

1. This pressure vessel shall maintain working pressures sufficient to prevent organic liquid loss or VOC loss to the atmosphere at all times. [District Rule 4623] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rules 220, 4301 and 4801] Federally Enforceable Through Title V Permit

2. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rule 2201 and District Rule 4307] Federally Enforceable Through Title V Permit

3. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rule 2201] Federally EnFORCEable Through Title V Permit

4. Emission rates shall not exceed any of the following: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4301 and 4801] Federally Enforceable Through Title V Permit

5. Emission rates shall not exceed any of the following: PM10: 0.8 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.6 lb/day, NOx (as NO2): 20.2 lb/day and 1,325 lb/year, or CO: 16.9 lb/day and 1,361 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Compliance with sulfur emission limits or fuel sulfur content limits may be demonstrated by firing the unit only on PUC or FERC regulated natural gas, or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit, or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.4.1.1] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least twice each calendar year, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NOx analyzing has been performed. [District Rule 4307, 6.1.2] Federally Enforceable Through Title V Permit

16. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

17. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

19. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-667-6

SECTION: 35  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
HEATER TREATHER WITH A 700 BBL VESSEL WITH PRESSURE RELIEF VENT TO S-1547-461, S-1547-463, OR S-1547-465 AND PERMIT-EXEMPT BURNER (NATURAL GAS-FIRED, 5 MMBTU/HR OR LESS)

PERMIT UNIT REQUIREMENTS

1. This pressure vessel shall maintain working pressures sufficient to prevent organic liquid loss or VOC loss to the atmosphere at all times. [District Rule 4623] Federally Enforceable Through Title V Permit.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-990-10
EXPIRATION DATE: 09/30/2007
SECTION: 19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
HEATER TREATER AND A HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM (LOST HILLS) WITH A PERMIT EXEMPT BURNER (NATURAL GAS-FIRED, 5.0 MMBTU/HR OR LESS)

PERMIT UNIT REQUIREMENTS

1. Vessel shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operation pressure/vacuum vent and vapor balance system. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Total fugitive VOC emission rate from vapor recovery components associated with this emission unit shall not exceed 11.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Any vessel gauging or sampling device or other appurtenance in vapor service on a vessel vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

8. All piping, fittings, valves, gauging and sampling devices and appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
9. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Except for periods of tank or vessel cleaning, vapor control system maintenance or power outages, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Formerly S-1511-621.
PERMIT UNIT REQUIREMENTS

1. Vessel shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operation pressure/vacuum vent and vapor balance system. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Total fugitive VOC emission rate from vapor recovery components associated with this emission unit shall not exceed 11.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Any vessel gauging or sampling device or other appurtenance in vapor service on a vessel vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

8. All piping, fittings, valves, gauging and sampling devices and appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Except for periods of tank or vessel cleaning, vapor control system maintenance or power outages, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Formerly S-1511-622.
PERMIT UNIT REQUIREMENTS

1. Vessel shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operation pressure/vacuum vent and vapor balance system. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Total fugitive VOC emission rate from vapor recovery components associated with this emission unit shall not exceed 12.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Any vessel gauging or sampling device or other appurtenance in vapor service on a vessel vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All piping, fittings, valves, gauging and sampling devices and appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Except for periods of tank or vessel cleaning, vapor control system maintenance or power outages, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-994-10

EXPIRATION DATE: 06/30/2007

SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
4.2 MMBTU/HR GAS-FIRED HEATER TREATING WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATING SECTION AND VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on non-certified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10: 0.012 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.004 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4301.9] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates shall not exceed any of the following: PM10: 1.2 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 20.2 lb/day or 2649 lb/year, or CO: 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. Heater treater and appurtenances shall be maintained leak-free (as defined in Rule 4623) except during periods of unit maintenance or cleaning, vapor control system maintenance, and power curtailment. [District Rule 2201] Federally Enforceable Through Title V Permit

18. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. Formerly S-1511-627.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-995-9
EXPIRATION DATE: 06/30/2007
SECTION: NW14 TOWNSHIP: 31S RANGE: 22E
EQUIPMENT DESCRIPTION:
5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE 5 MMBTU/HR JOHN ZINK MODEL SZ12.2-G-50 BURNER AND FGR AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - (NORTH MIDWAY UNIT B-101A - ALBERTA SHALE LEASE)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 4307, 5.5] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 4405, 5.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1
grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur
(as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds
per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day,
NOx (as NO2): 4.3 lb/day, or CO: 4.4 lb/day. [District Rule 2201 and 4307] Federally Enforceable Through Title V
Permit

11. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally
Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in
writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in
which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring
shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring.
Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the
last month. [District Rules 2520, 9.4.2, and 4307] Federally Enforceable Through Title V Permit

14. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the
allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as
possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed
the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District
within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of
conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The
permittee must then correct the violation, show compliance has been re-established, and resume monitoring
procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee
may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition.
[District Rule 2520, 9.4.2 and 4307] Federally Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the owner/operator shall have unit tuned at least twice each calendar year, from four
to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in
accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators,
and Process Heaters). Permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of
any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational
characteristics monitored. [District Rule 4307, 5.5 and 6.1] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions
representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either
taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out
over the 15 consecutive-minute period. [District Rule 4307] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. No determination of compliance shall be established
within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within
30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above
and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of
its normal operation, source testing may commence sooner than specified above and continue through its normal
cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
18. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

19. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

20. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4307] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081 and 4307] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201 and 4307, 6.2] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

36. Note: Formerly S-1511-628
PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

8. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 3.4 lb/day, SOx (as SO2): 0.5 lb/day, VOC: 0.7 lb/day, NOx (as NO2): 33.6 lb/day or 3154 lb/year, or CO: 8.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

18. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. Formerly S-1511-631.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-999-12
SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E
EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER
AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND SERVED BY VAPOR CONTROL
LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101C - ALBERTA SHALE LEASE)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil.
   [District Rule 2201] Federally Enforceable Through Title V Permit

2. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865.
   [District Rule 2201] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
   Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
   Enforceable Through Title V Permit

6. If the unit is fired on uncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
   the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
   ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10:
   0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30
   ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 4405, 5.1] Federally
   Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates during startup, shutdown, and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 33.6 lb/day or 1577 lb/year, or CO: 4.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

18. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

19. (969) All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
20. {970} A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. {971} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. {972} Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. {973} Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. {974} If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. {975} Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. {981} The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

30. Formerly S-1511-632.
PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801 c. N Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emission rates shall not exceed any of the following: PM10: 1.9 lb/day, SOx (as S02): 0.5 lb/day, NOx (as NO2): 24.0 lb/day or 3154 lb/year, or CO: 20.2 lb/day or 3241 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

18. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance not to exceed 1 hour each per occurrence. [District Rule 2201] Federally Enforceable Through Title V Permit

19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. Formerly S-1511-644
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit
9. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1
grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur
(as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds
per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day,
NOx (as NO2): 33.6 lb/day or 3154 lb/year, or CO: 8.9 lb/day. [District Rule 2201] Federally Enforceable Through
Title V Permit

11. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally
Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in
writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the
manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified
technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a
continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is
required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit
for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the
operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating
parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally
Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2)
a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of
the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the
NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3)
make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any
corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational
characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. No determination of compliance shall be established
within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within
30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above
and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of
its normal operation, source testing may commence sooner than specified above and continue through its normal
cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

18. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except
during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

19. (969) All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA
Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If
any of the tank components are found to leak during an annual inspection, the inspection frequency for that component
type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during
five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located
in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a
platform when access is required from the platform) locations shall be inspected at least annually and components
located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a
unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
20. {970} A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. {971} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. {972} Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. {973} Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. {974} If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. {975} Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. Formerly S-1511-634.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Compliance with sulfur emission limits or fuel sulfur content limits may be demonstrated by firing the unit only on PUC or FERC regulated natural gas, or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit, or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.21] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed either of the following: PM10: 0.008 lb/MMBtu or SOx (SO2): 0.002 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rule 4301] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-1005-12 - 1:33PM - GOUGH
10. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day and 1,577 lb/year, or CO: 20.2 lb/day and 1,621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair, or maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NOx analyzing has been performed. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

26. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

27. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit’s operating parameters for the purposes of assuring compliance. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1006-12
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER
AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND A FLUID TREATMENT
CHAMBER SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-
884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil.  
   [District Rule 2201] Federally Enforceable Through Title V Permit

2. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, 
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur 
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District 
   Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once 
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units 
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans 
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating 
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, 
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally 
   Enforceable Through Title V Permit

4. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel 
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using 
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in 
   the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each 
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with 
   ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction 
   program, the fluid treatment chamber shall be connected to a vapor recovery system consisting of a closed vent system 
   that collects all VOCs from the fluid treatment chamber and a VOC control device. The vapor recovery system shall 
   be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control 
   devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in 
   Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup shutdown and refractory curing shall not exceed any of the following: PM10: 
   0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 
   0.037 lb/MMBtu or 50 ppmv @ 3% O2, and VOC: 0.005 lb/MMBtu. [District Rules 2201 and 4307, 5.1] Federally 
   Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates during startup shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

19. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system isshutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

21. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair or maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

23. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
31. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

34. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

35. Formerly S-1511-641
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1007-12
EXPIRATION DATE: 06/30/2007

SECION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
GAS-FIRED HEATER TREATER WITH 5.0 MMBTU/HR MAXON MODEL M-PAKT BURNER S VENTED TO VAPOR
CONTROL SYSTEM LISTED ON S-1547-843. (#D201C) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

8. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

18. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
20. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-642.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1008-11
EXPIRATION DATE: 06/30/2007

SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
HEATER TREATER WITH ONE 5.0 MMBTU/HR MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER WITH HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOUR CONTROL SYSTEM LISTED ON S-1547-843. (#D201D) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.3.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

18. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. Formerly S-1511-643.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1009-11
EXPIRATION DATE: 06/30/2007
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W
EQUIPMENT DESCRIPTION:
HEATER TREATER WITH ONE 5.0 MM BTU/HR MAXON MODEL M-PAKT NATURAL GAS-FIRED BURNER WITH HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-843. (#D201E) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.4.2 and 4301, 5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN-COUNTY, CA

DRAFT
Facility-wide Permit to Operate.

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 3154 lb/year, or CO: 20.2 lb/day or 3241 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

15. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

18. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit
30. Formerly S-1511-644.
PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.21] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

9. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 1.9 lb/day, SOx (as SO2): 0.5 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

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20. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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24. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of uncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit
30. Formerly S-1511-645.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1011-12
EXPIRATION DATE: 05/31/2007
SECTION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
NATURAL GAS-FIRED HEATER TREATER (#D201G) WITH ONE 5 MM BTU/HR MAXON MODEL M-PAKT BURNER
WITH AND A FLUID TREATMENT CHAMBER SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1547-
843 (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil.
   [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843.
   [District Rule 2201] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
   Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally
   Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
   the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
   ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu,
   SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or
   50 ppmv @ 3% O2. [District Rules 2201 and 4307, 5.1] Federally Enforceable Through Title V Permit

8. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1
   grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur
   (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds
   per MMBtu. [District Rules 4301, 5.2 and 4801, 3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 3154 lb/year, or CO: 20.2 lb/day or 3241 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.4] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

13. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.5] Federally Enforceable Through Title V Permit

14. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

15. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

16. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.6.3 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307, 5.6] Federally Enforceable Through Title V Permit

17. Vessel covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

18. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
20. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-646.
TANKS
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-223-3

EXPIRATION DATE: 09/30/2007

SECTION: 22  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
30,000 BBL (1,260,000 GALLON) EXTERNAL FLOATING ROOF WET OIL TANK WITH MECHANICAL SHOE PRIMARY SEAL AND ZERO GAP WIPER-TYPE SECONDARY SEAL. (WIER)

PERMIT UNIT REQUIREMENTS

1. Tank shall store crude oil only. [District Rule 2201] Federally Enforceable Through Title V Permit
2. True vapor pressure of liquid stored shall not exceed 2.0 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Maximum tank throughput shall not exceed 10,000 bbl/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Liquid shall be removed from tank by pipeline only. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Tank water draw-off shall be pumped to T600, S-1547-652. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a cover consisting of either a pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [40 CFR 60.112a(a)(1) and District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit
7. Roof shall be floating on the liquid (i.e., off the roof leg supports) at all times except during initial fill and when tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112a(a)(1) and District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit
8. Accumulated area of gaps between tank wall and primary seal shall not exceed 10.0 inches per foot of tank diameter and the width of any portion of any gap shall not exceed one and one-half (1 1/2) inch. [40 CFR 60.112a(a)(1)(i)(A)] Federally Enforceable Through Title V Permit
9. Cumulative length of all gaps, between the tank shell and the primary seal: 1) Greater than one-half (1/2) inch shall not exceed 10 percent of the circumference of the tank; and 2) Greater than one-eighth (1/8) inch shall not exceed 30 percent of the circumference of the tank. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
10. The primary seal shall have no continuous gap greater than one-eighth (1/8) inch shall exceed 10 percent of the tank circumference. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
11. Gap between the tank shell and secondary seal shall not exceed one-half (1/2) inch. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
12. Cumulative length of all gaps between the tank shell and secondary seal greater than one-eighth (1/8) inch shall not exceed 5 percent of the tank circumference. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
13. One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

14. There shall be no holes, tears, or other openings in the shoe, seal fabric or seal envelope of the primary seal. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

15. Secondary seal shall be installed above the primary seal. [40 CFR 60.112a(a)(1)(ii)(A)] Federally Enforceable Through Title V Permit

16. Accumulated area of gaps between tank wall and the secondary seal shall not exceed 1.0 sq inch per foot of tank diameter and the width of any portion of any gap shall not exceed one-half (1/2) inch. [40 CFR 60.112a(a)(1)(i)(B) and District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

17. Secondary seal shall have no openings, holes or tears in the seal or seal fabric. [40 CFR 60.112a(a)(1)(ii)(C) and District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

18. Geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least eighteen inches in the vertical plane above the liquid surface. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

19. Secondary seal shall allow easy insertion of probes up to one and one-half (1-1/2) inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

20. Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

21. Operator shall be exempt from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal. [40 CFR 60.112a(a)(1)(ii)(D)] Federally Enforceable Through Title V Permit

22. Each roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [40 CFR 60.112a(a)(1)(iv), District Rule 4623, 5.1.6] Federally Enforceable Through Title V Permit

23. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface. [40 CFR 60.112a(a)(1)(iii) and District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

24. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas-tight, except when the device or appurtenance is in use. Gas-tight shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

25. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
26. A facility operator, upon detection of a leaking cover, seal, or lid, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. An operator shall reinspect a cover, seal, or lid for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Emissions from covers, seals, or lids which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting reinspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Any leak in a cover, seal, or lid shall be repaired to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Automatic bleeder vents shall be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

33. Rim vents shall be set to open when the roof is being floated off the roof legs supports or at the manufacturer’s recommended setting. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

34. Operator shall perform gap measurements on primary seals within 60 days of the initial fill and at least once every 5 years thereafter. Operator shall perform gap measurements on secondary seals within 60 days of the initial fill with petroleum liquid and at least once every year thereafter. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill. [40 CFR 60.113a(a)(1)(i)(A), (B), and (C)] Federally Enforceable Through Title V Permit

35. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(C)] Federally Enforceable Through Title V Permit

36. Operator shall determine gap widths in the primary and secondary seals using the following procedure: 1) Measure seal gaps, at one or more floating roof levels when the roof is floating off leg supports; 2) Measure seal gaps around entire circumference of the tank in each place where a one-eighth (1/8) inch diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location; 3), Total surface area of each gap shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance; 4) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank. [40 CFR 60.113a(a)(1)(ii) and (iii)] Federally Enforceable Through Title V Permit
37. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, and raw data obtained in the measurement process in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(D)] Federally Enforceable Through Title V Permit

38. Operator shall provide the APCO with 30 days notice of the gap measurement to afford the District the opportunity to have an observer present. [40 CFR 60.113a(a)(1)(iv)] Federally Enforceable Through Title V Permit

39. If the accumulated area of gaps or gap width exceed limits, operator shall submit a report to the District within 60 days of the date of measurement. Report should include identification of the vessel, reason vessel did not meet the specifications, and a description of the actions necessary to bring the storage vessel into compliance. [40 CFR 60.113a(a)(1)(i)(E)] Federally Enforceable Through Title V Permit

40. The primary seal envelope shall be made available for unobstructed inspection by the District personal on an annual basis at locations selected along its circumference at random by the District personal and minimum of four (4) locations shall be made available. If the District personal suspects a violation may exist, further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1] Federally Enforceable Through Title V Permit

41. Operator shall keep a record of liquids stored in each container, period of storage, storage temperature, and both the Reid and maximum true vapor pressure of such liquids. [District Rule 4623, 6.3 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

42. For crude oil with an API gravity of greater than 26 degrees, true vapor pressure shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure of Petroleum Products), and conversion of RVP to TVP at the tank's maximum organic liquid storage temperature according to the procedures in Appendix B of Rule 4623. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB, and US EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

43. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

44. Maximum true vapor pressure may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.115a(b)] Federally Enforceable Through Title V Permit

45. Permittee shall maintain accurate daily records of the tank throughput and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-381-3
EXPIRATION DATE: 05/31/2007
SECTION: 26  TOWNSHIP: 29S  RANGE: 21E
EQUIPMENT DESCRIPTION:
1,000 BBL (42,000 GALLON) CONE ROOF FUEL OIL STORAGE TANK #T-230 (A/F DEHY)

PERMIT UNIT REQUIREMENTS

1. Storage temperature shall not exceed 200 deg. F. [District Rule 2201] Federally Enforceable Through Title V Permit
2. True vapor pressure of liquid stored shall be less than 0.5 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Only crude oil shall be stored. [District Rule 2201] Federally Enforceable Through Title V Permit
4. No truck loading shall occur. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Water draw-off shall be accomplished so as to prevent odoriferous emissions. [District Rule 4102]
6. Tank shall have no sulfur compound emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Average daily throughput (on an annual basis) shall not exceed 3,000 bbl/day. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC emission rate shall not exceed 0.64 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operator shall keep accurate records of annual throughput, storage temperature and the maximum true vapor pressure (periodic sampling of no less than once a year) of liquids stored and shall make readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2 and 6.4.4] Federally Enforceable Through Title V Permit
11. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit
12. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-384-3
EXPIRATION DATE: 05/31/2007

SECTION: 28  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
65,000 BBL (2,730,000 GALLON) FIXED ROOF PETROLEUM STORAGE TANK WITH P/V VENTS #T-470 CONNECTED TO VAPOR RECOVERY SYSTEM SHARED WITH S-1548-45 (OT&M)

PERMIT UNIT REQUIREMENTS

1. Tank vapors shall vent only through vapor collection system and discharge only to gas gathering system. [District Rule 2201] Federally Enforceable Through Title V Permit

2. P/v vents shall be set to relieve at a pressure higher than required to activate vapor compressor. [District Rule 2201] Federally Enforceable Through Title V Permit

3. During normal operation, p/v vents shall be vapor tight except for in-breathing. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Condensate shall be disposed of in a manner preventing VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 95%. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

8. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 25. [District Rule 4623, 6.4.6 and 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623 and Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-442-9

EXPIRATION DATE: 06/30/2007

SECTION: 16  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
100 BBL (4,200 GALLON) FIXED ROOF TANK T-116 (10 FT DIAMETER X 8 FT HIGH) WITH VAPOUR CONTROL SYSTEM INCLUDING PRE/AFTER COOLER, SUCTION & DISCHARGE KNOCKOUT VESSELS (S-1547-1204 AND '-1205), 2 -100 HP COMPRESSORS, 2-SULFUR SCRUBBING TOWERS, AND ASSOCIATED PIPING

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall serve tanks S-1547-442, '-443, '-584 through '-587, & '-658, and produced gas piping from the Republic Lease, Sections 5, 7, and 8. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The operator shall ensure that the vapor control system is functional and is operating as designed whenever organic liquids or organic liquid vapors are contained in tanks S-1547-442, '-443, '-584 through '-587, & '-658. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Collected vapors shall be reinjected into DOGGR approved wells or incinerated in steam generators S-1547-159 and S-1547-656. Standby incineration shall be provided in flare S-1547-588 during steam generator shut-down. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Only wells approved by the California Department of Conservation Division of Oil, Gas and Geothermal Resources shall be used for reinjection. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.7 of Rule 2201. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

6. Dry H2S scrubbing towers shall be utilized as necessary to maintain compliance with sulfur compounds emission limits of steam generators approved to incinerate vapors from control system. [District Rules 2201 and 4801, 3.0] Federally Enforceable Through Title V Permit

7. Sulfur scrubbing systems shall use District approved scrubbing agents. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the vapor control system and gas components serving the tank battery shall not exceed 26.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. If VOC vapor disposal device is inoperative, collected vapors shall not be vented to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Tank vapors shall only vent to vapor collection system described on this permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

12. VOC fugitive emissions from the tank T-116 and gas components serving the tank battery shall not exceed 1.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit


15. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

16. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 3.17 & 5.6] Federally Enforceable Through Title V Permit

17. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

18. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

19. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

20. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

21. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

22. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

23. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
24. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

25. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 2.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-4531R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 3.17] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. {2426} The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

5. Except during cleaning operations, emissions shall not exceed 2.81 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Vapor control system shall be equipped with separator vessel(s), suction scrubbers, discharge scrubber(s), H2S scrubber(s), heat exchanger(s), vapor compressor(s), vapor piping to vapor control system listed in S-1135-20, uncondensed vapor line from the steam enhanced well vapor control system listed on S-1135-20 and vapor piping to steam generators S-1547-234, '238 and '248 or S-1135-12 and '24. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Maximum VOC content of vapor in the vapor control system piping attached to S-1135-20 shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Except during authorized tank cleaning operations, the operator shall ensure that the vapor recovery system is functional and operating as designed whenever organic liquids or organic liquid vapors are present in the tanks or associated piping. The operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8260, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

11. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

12. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank roof, seams, welds, joints, gauge hatches, sample wells, pressure relief valves, etc. shall be maintained in a leak-free condition (as defined in District Rule 4623), [District Rule 2201] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least two hours after all the liquid in the tank has been drained; or 2) Displace VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) Exhaust VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Tank cleaning shall be performed using one of the following solvents: water, hot water, diesel, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams per liter VOC content or less. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date and time that tank cleaning was initiated, the date and time tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2080 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. The pressure transmitters shall be inspected and maintained in good operating condition. The inspections shall be conducted not more than once per quarter. Replacing and repairing of pressure transmitters shall not exceed one hour per day per transmitter. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of dates of periodic tank inspections. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
24. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-461-6
EXPIRATION DATE: 06/31/2007
SECTION: NE35  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
1,000 BBL (42,000 GALLON) FIXED ROOF, WELDED PETROLEUM REJECT TANK (#T-110) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PTO S-1547-460 (NATIONAL DEHY)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8260, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Vapor collection system shall not discharge to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

14. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 25. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit

26. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q}, \) where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q = \) flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

29. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-462-7

SECTION: NE35   TOWNSHIP: 32S   RANGE: 23E

EQUIPMENT DESCRIPTION:
500 BBL (21,000 GALLON) WELDED, PETROLEUM FIXED ROOF SAND TANK (#T-500) WITH VAPOR CONTROL SYSTEM LISTED ON PTO # S-1547-460 (NATIONAL RECYCLE PLANT)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8260, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain accurate records of true vapor pressure (periodic sampling of no less than once a year) and tank cleaning duration. Records shall be retained, and made readily available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
12. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

14. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 18. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

25. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit

26. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V / Q, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

29. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-463-6
SECTION: NE35 TOWNSHIP: 32S RANGE: 23E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
2,000 BBL (84,000 GALLON) WELDED, FIXED ROOF PETROLEUM STOCK TANK (#T-109) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PTO S-1547-460 (NATIONAL DEHY)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8260, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

13. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

14. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection; and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 18. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
22. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

24. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit

25. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q = \) flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 4.4] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8260, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Vapor collection system shall not discharge to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Vapor control efficiency shall be maintained at no less than 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

14. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
22. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 18. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit

26. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

29. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 3.17] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. {2426} The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 5.17] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. {2426} The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-586-7
SECTION: SW16  TOWNSHIP: 32S  RANGE: 23E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
2,000 BBL (84,000 GALLON) FIXED ROOF, 29.7 FT. DIAMETER X 16 FT. HIGH, STOCK TANK T-150 CONNECTED TO
VAPOR CONTROL SYSTEM (LOCKWOOD DEHY)

PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit
7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 3.17] Federally Enforceable Through Title V Permit
8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit
9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 3.17] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN-COUNTY, CA
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of stored liquids shall be less than 0.5 psia. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2 and 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of stored liquids shall be less than 0.5 psia. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2 and 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of stored liquids shall be less than 0.5 psia. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2 and 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-639-5
SECTION: 22  TOWNSHIP: 31S  RANGE: 22E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
30,000 BBL (1,260,000 GALLON) EXTERNAL FLOATING ROOF TANK, 67 FT. DIA. BY 48 FT. TALL, WITH METALLIC SHOE TYPE PRIMARY SEAL AND "ZERO GAP" FLEX-A-SEAL SECONDARY SEAL (WIER DEHY)

PERMIT UNIT REQUIREMENTS

1. Storage temperature shall not exceed 194 degrees F. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be equipped with operational temperature indicator for stored liquids. [District Rule 2201] Federally Enforceable Through Title V Permit
3. True vapor pressure of stored liquids at storage temperature shall be less than 1.5 psia. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Daily throughput of crude oil shall not exceed 15,000 barrels per day without prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Emissions of volatile organic compounds (VOC) shall not exceed 0.001 lb/bbl throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The tank shall be equipped with a cover consisting of either a pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [40 CFR 60.112a(a)(1), District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit
7. Roof shall be floating on the liquid (i.e., off the roof leg supports) at all times except during initial fill and when tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112a(a)(1) and District Rule 4623, 5.3.1] Federally Enforceable Through Title V Permit
8. Accumulated area of gaps between tank wall and primary seal shall not exceed 10.0 inches per foot of tank diameter and the width of any portion of any gap shall not exceed one and one-half (1 1/2) inch. [40 CFR 60.112a(a)(1)(i)(A)] Federally Enforceable Through Title V Permit
9. Cumulative length of all gaps, between the tank shell and the primary seal: 1) Greater than one-half (1/2) inch shall not exceed 10 percent of the circumference of the tank; and 2) Greater than one-eighth (1/8) inch shall not exceed 30 percent of the circumference of the tank. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
10. The primary seal shall have no continuous gap greater than one-eighth (1/8) inch shall exceed 10 percent of the tank circumference. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
11. Gap between the tank shell and secondary seal shall not exceed one-half (1/2) inch. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
12. Cumulative length of all gaps between the tank shell and secondary seal greater than one-eighth (1/8) inch shall not exceed 5 percent of the tank circumference. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit
13. One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface. [40 CFR 60.112a(a)(1)(i)(C) and District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

14. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope of the primary seal. [40 CFR 60.112a(a)(1)(i)(D), District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

15. Secondary seal shall be installed above the primary seal. [40 CFR 60.112a(a)(1)(ii)(A)] Federally Enforceable Through Title V Permit

16. Accumulated area of gaps between tank wall and the secondary seal shall not exceed 1.0 sq inch per foot of tank diameter and the width of any portion of any gap shall not exceed one-half (1/2) inch. [40 CFR 60.112a(a)(1)(i)(B) and District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

17. Secondary seal shall have no openings, holes or tears in the seal or seal fabric. [40 CFR 60.112a(a)(2)(ii)(C), District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

18. Geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least eighteen inches in the vertical plane above the liquid surface. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

19. Secondary seal shall allow easy insertion of probes up to one and one-half (1-1/2) inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

20. Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal. [District Rule 4623, 5.3.2] Federally Enforceable Through Title V Permit

21. Operator shall be exempt from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal. [40 CFR 60.112a(a)(1)(ii)(D)] Federally Enforceable Through Title V Permit

22. Each roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [40 CFR 60.112a(a)(1)(iv), District Rule 4623, 5.1.6] Federally Enforceable Through Title V Permit

23. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

24. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas-tight, except when the device or appurtenance is in use. Gas-tight shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 5.5.1] Federally Enforceable Through Title V Permit

25. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
26. A facility operator, upon detection of a leaking cover, seal, or lid, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. An operator shall reinspect a cover, seal, or lid for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Emissions from covers, seals, or lids which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting reinspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Any leak in a cover, seal, or lid shall be repaired to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Automatic bleeder vents shall be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

33. Rim vents shall be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

34. Operator shall perform gap measurements on primary seals within 60 days of the initial fill and at least once every 5 years thereafter. Operator shall perform gap measurements on secondary seals within 60 days of the initial fill with petroleum liquid and at least once every year thereafter. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill. [40 CFR 60.113a(a)(1)(i)(A), (B), and (C)] Federally Enforceable Through Title V Permit

35. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(C)] Federally Enforceable Through Title V Permit

36. Operator shall determine gap widths in the primary and secondary seals using the following procedure: 1) Measure seal gaps, at one or more floating roof levels when the roof is floating off leg supports; 2) Measure seal gaps around entire circumference of the tank in each place where a one-eighth (1/8) inch diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location; 3) Total surface area of each gap shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance; 4) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank. [40 CFR 60.113a(a)(1)(ii) and (iii)] Federally Enforceable Through Title V Permit
37. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, and raw data obtained in the measurement process in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(D)] Federally Enforceable Through Title V Permit

38. Operator shall provide the APCO with 30 days notice of the gap measurement to afford the District the opportunity to have an observer present. [40 CFR 60.113a(a)(1)(iv)] Federally Enforceable Through Title V Permit

39. If the accumulated area of gaps or gap width exceed limits, operator shall submit a report to the District within 60 days of the date of measurement. Report should include identification of the vessel, reason vessel did not meet the specifications, and a description of the actions necessary to bring the storage vessel into compliance. [40 CFR 60.113a(a)(1)(i)(E)] Federally Enforceable Through Title V Permit

40. The primary seal envelope shall be made available for unobstructed inspection by the District personal on an annual basis at locations selected along its circumference at random by the District personal and minimum of four (4) locations shall be made available. If the District personal suspects a violation may exist, further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 6.1] Federally Enforceable Through Title V Permit

41. Operator shall keep a record of liquids stored in each container, period of storage, storage temperature, and both the Reid and maximum true vapor pressure of such liquids. [District Rule 4623, 6.3 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

42. For crude oil with an API gravity of greater than 26 degrees, true vapor pressure shall be determined by measuring the Reid Vapor Pressure (RVP) using ASTM D 323-94 (Test Method for Vapor Pressure of Petroleum Products), and conversion of RVP to TVP at the tank's maximum organic liquid storage temperature according to the procedures in Appendix B of Rule 4623. As an alternative to using ASTM D 323-94, the TVP of crude oil with an API gravity range greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB, and US EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

43. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

44. Maximum true vapor pressure may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.115a(b)] Federally Enforceable Through Title V Permit

45. Permittee shall maintain accurate daily records of the tank throughput and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall include vapor piping from free water knockout tanks S-1547-643 to '645, '647 to '649, & '652 to '654, with pressure relief vents (for emergency atmospheric release) located on the collection line. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall include vapor compressors with suction and discharge knockout vessels, serving tanks and vessels described above. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Vapor piping from free water knockout may connect upstream or downstream of vapor compressors to accommodate operational needs. [District Rule 2201] Federally Enforceable Through Title V Permit

4. During power-switching events, no produced fluids shall be introduced into any tank at the Weir tank battery. All production into the tanks shall cease prior to shutting down the tank vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Each power-switching event shall not exceed 2 hours, and total annual hours of vapor control system shutdown during power-switching shall not exceed 96 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Prior to disconnecting power from the TVR systems, during a power-switching event, AERA shall monitor the pressure in the shutdown TVR system to determine pressure relief valve(s) pressure settings are not exceeded. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During power-switching events, there shall be no leaks (> 10,000 ppmv) from any vapor component in the TVR system. [District Rule 2201] Federally Enforceable Through Title V Permit

8. During power-switching events, permittee shall monitor TVR system piping and vapor components to ensure there are no leaks (> 10,000 ppmv). [District Rule 2201] Federally Enforceable Through Title V Permit

9. Vapor compressor(s) may be operated continuously or as required by demand. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit

11. Vapor control system pressure transmitters shall be inspected and maintained in good operating condition. The inspections shall be conducted on a quarterly basis. Replacing and repairing of each pressure transmitter shall not exceed one hour per day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Vapor disposal shall be limited to injection into the formation. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Disposal of tank vapor by injection into the formation shall only be performed using DOGGR approved wells. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. VOC fugitive emissions from the components in gas service on the tank, FWKO vessels, tank vapor collection piping and vapor control system shall not exceed 12.9 lb-VOC/day (includes 0.46 lb/day, 0.46 lb-VOC/quarter for VRS sensor maintenance). [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit

16. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

17. VOC content of THC in collected vapors shall be sampled not less than annually. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Fixed roof tank shall be fully enclosed and shall be maintained in a leak-free condition. The APCO-approved vapor control system consists of a closed vent system that collects all VOCs from the storage tank and vents them to DOGGR approved disposal well(s). The vapor control system shall be maintained in a leak-free condition. Vapor control system shall reduce VOC emissions by at least 99% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

19. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

20. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

22. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

24. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: 

\[ t = \frac{2.3 V}{Q} \]

where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

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Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
29. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

30. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

39. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of DOGGR approved injection wells connected to this vapor control system, % VOC of THC in collected vapors, the date and duration of vapor control system maintenance operations, and all records of required monitoring data and support information. [District Rule 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

42. Permittee shall maintain records of date and duration of each power switching event. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

43. All records required by this permit shall be maintained and retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 1070 and 4623, 6.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 1.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 °F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623, 6.2.2] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The operator shall maintain records of % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-645-8  EXPIRATION DATE: 03/31/2007
SECTION: SW22  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
2,000 BBL (84,000 GALLON) FIXED ROOF, 29.7 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL CLARIFIER TANK T-430, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, & -652 TO -654 (WIER CDF)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-645-8  Sep 20 2011 15:00AM - DOUG120
13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The operator shall maintain records of % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 2.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t = \text{time} \), \( V = \text{tank volume (cubic feet)} \), and \( Q = \text{flow rate to the vapor control system as determined using appropriate engineering calculations} \). [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

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Permit Unit Requirements for S-1547-648-8 (continued)

23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The operator shall maintain records of % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3}{V/Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 °F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The operator shall maintain records of % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
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24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Kα and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The operator shall maintain records of % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-653-8
SECTION: SW22  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
500 BBL (21,000 GALLON) FIXED ROOF, 15.3 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL SLOP TANK T-610, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, & -652 TO -654 (WIER CDF)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit
7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit
10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit
11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

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16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible(over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit.


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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-654-9
EXPIRATION DATE: 06/31/2007
SECTION: SW22  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
500 BBL (21,000 GALLON) FIXED ROOF, 21.5 FT. DIAMETER X 8 FT. HIGH, CRUDE OIL DRAIN TANK T-700, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, & -652 TO -654 (WIER CDF)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District Rule 2201] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. "Leak-free" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District Rule 2201] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever these is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

28. The operator shall maintain records of % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 2.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-4531R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623, 5.6.1] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623, 3.17] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623, 5.6.1] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-843-9

SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
3,000 BBL (126,000 GALLON) PRODUCED WATER FIXED ROOF STORAGE TANK (#F501A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-884, '-1005 TO '-1011, AND '-1025), INCLUDING LIQUID KNOCKOUT VESSELS, COMPRESSORS AND COOLERS, AND PIPING TO SULFUR SCRUBBER S-1547-819

PERMIT UNIT REQUIREMENTS

1. Water/VOC condensate from all liquid knockout vessels shall be piped to the production manifold or to an organic liquid storage tank that is served by the vapor recovery system. [District Rule 2201] Federally Enforceable Through Title V Permit

2. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank and the vapor recovery system shall not exceed 1.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. H2S concentration in tank vapor space shall not exceed 20,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Compliance source testing for H2S concentration of tank vapor space shall be conducted annually (or as approved by the District). [District Rule 2201] Federally Enforceable Through Title V Permit

6. H2S concentration in tank vapor space shall be determined by: GC/FPD or ASTM D-3246. [District Rule 1081] Federally Enforceable Through Title V Permit

7. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

8. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. An alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

11. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

12. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

14. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be constructed and maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Tank gauging, thief hatches and/or sampling devices shall be equipped with gas tight covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

19. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

20. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases: 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. {2620} A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. {2621} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Permittee shall maintain monthly records of true vapor pressure (TVP) of liquids stored and H2S concentration of tank vapor space. [District Rule 2201 and District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

31. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-282.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-844-6
EXPIRATION DATE: 06/30/2007
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W
EQUIPMENT DESCRIPTION:
126,000 GALLON 40' DIA. FIXED ROOF RECLAIM OIL TANK (F401A) VENTED TO VAPOR CONTROL LISTED ON S-1547-843. - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases: 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. [2591] The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-283.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Permit Unit Requirements for S-1547-845-6 (continued)
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. (2591) The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-284.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-846-6
SECTION: NE35 TOWNSHIP: 12N RANGE: 24W
EXPIRATION DATE: 06/31/2007

EQUIPMENT DESCRIPTION:
126,000 GAL 30' DIA. FIXED ROOF PRODUCED WATER TANK (#F201A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO -853, -882, -883, -884, -1005 TO -1011, AND -1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. (2591) The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-847-6
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
126,000 GAL 30’ DIA. FIXED ROOF PRODUCED WATER TANK (#F201B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO ‘-853, ‘-882, ‘-883, ‘-884, ‘-1005 TO ‘-1011, AND ‘-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory “test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph”, as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank’s maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-286.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-287.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permitee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. {2589} For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. {2590} For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

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14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

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4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

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7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
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10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

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15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. {2604} All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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18. {2620} A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. {2621} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-289.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-851-6
EXPIRATION DATE: 06/30/2007

SECTION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
210,000 GALLON, 40' DIA. FIXED ROOF LACT OIL TANK (F101A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS
SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District
Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating
Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening
Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2
lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under
all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every
24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid
stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable
Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of
the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in
Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally
Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM
Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The
conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards
As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up
to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District
Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction
program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that
collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-
approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices
having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7
of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCES, KERN COUNTY, CA
5-1547-851-6 Sep 21 3 2011 10 00AM - GOGHD

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are are part of the Facility-wide Permit to Operate.
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-290.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. (2589) For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. (2590) For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. (2591) The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-291.
PERMIT UNIT: S-1547-853-6  
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W  
EQUIPMENT DESCRIPTION:  
210,000 GALLON, 40' DIA. FIXED ROOF LACT OIL TANK (#F101C) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vents to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

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18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-292.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-854-9
EXPIRATION DATE: 06/30/2007
SECTION: SE19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
126,000 GALLON (3,000 BBL) FIXED ROOF REJECT OIL TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1547-854 TO '863, AND '990 TO '992, INCLUDING VAPOR COMPRESSORS, COMPRESSOR RECYCLE COOLER, LIQUID KNOCKOUT VESSELS (INCLUDING FWKO #D-101A), AND PIPING TO SULFUR REMOVAL SYSTEM S-1547-714 (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Vapor control system compressor shall activate before the tank internal pressure exceeds relief valve settings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor control system shall be shared between units S-1547-854 through '863, and '990 through '992. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank and knockout vessels shall be designed and maintained to vent only to vapor control system, except during periods of tank or knockout vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Vapor control system shall vent only to sulfur removal system S-1547-714 during normal operations. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit
6. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit
8. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 71.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit
11. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
12. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

13. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
21. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-855-6
SECTION: SE19   TOWNSHIP: 26S   RANGE: 21E
EXPIRATION DATE: 09/30/2007

EQUIPMENT DESCRIPTION:
126,000 GALLON (3000 BBL) 30' DIA. FIXED ROOF RECLAIM OIL TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power curtailment. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit
3. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 4.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit
8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 4.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-857-6
SECTION: SE19 TOWNSHIP: 26S RANGE: 21E
EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
126,000 GALLON (3000 BBL) 30' DIA. FIXED ROOF LACT TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 4.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to be leaking during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-860-6
SECTION: SE19  TOWNSHIP: 26S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
4,200 GALLON (100 BBL) 10' DIA. CONSTANT LEVEL PIT TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623, 2.2 and 4.4] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 2.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 4531R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to be leaking during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during
   periods of tank cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally
   Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage
   temperature. [District Rule 4623, 2.0 & 4.4] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance
   activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor
   control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant.
   [District Rule 2201] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed
   2.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate
   as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for
   fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission
   factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally
   Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter
   from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule
   2201] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall
   be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel
   cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance.
   [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
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20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Unit cleaning shall not exceed 96 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

7. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
9. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Unit cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

5. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

7. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit
9. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

18. Note: Formerly S-1511-331.
PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC emissions shall not exceed the following 13.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The sand basin surface area shall not exceed 2,300 sq.ft. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

7. Note: Formerly S-1511-332
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-865-7
EXPIRATION DATE: 05/31/2007

SECTION: NE14 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:
5000 BBL (210,000 GAL) FIXED ROOF CONE BOTTOM CLARIFIER TANK WITH VAPOR CONTROL, INCLUDING 4
COMPRESSORS, 2 COMPRESSOR RECYCLE COOLERS, LIQUID KNOCKOUT VESSELS, & PIPING TO APPROVED
GAS DISPOSAL WELLS - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Vapor control system listed on this permit shall be connected to the following units: S-1547-865 through '-877, '-994, '-
995, '-998 through '-1001, and '-1016 through '-1018. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Vapor control system shall include compressors, recycle coolers, knockout vessels, and piping to DOGGR approved
disposal well(s). [District Rule 2201] Federally Enforceable Through Title V Permit
3. Vapor control efficiency shall be maintained at no less than 99% during normal operation. [District Rule 2201]
Federally Enforceable Through Title V Permit
4. During periods of voluntary demand reduction power outages, vapor control system shall operate through the use of an
operational pressure/vacuum vent and a vapor balanced system. [District Rule 2201] Federally Enforceable Through
Title V Permit
5. Uncondensed vapors from vapor compressor(s) shall only be piped to DOGGR approved gas disposal wells. [District
Rule 2201] Federally Enforceable Through Title V Permit
6. Permittee shall maintain a current listing of all DOGGR approved gas disposal wells connected to this vapor control
system, and such listing shall be made readily available for District inspection upon request. [District Rule 2201]
Federally Enforceable Through Title V Permit
7. Water and volatile organic compound (VOC) condensate from all liquid knockout drums shall be pumped to
production system. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times.
[District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not
exceed pressure relief valve setting [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Vapor control system pressure transmitters shall be inspected and maintained in good operating conditions. The
inspections shall be conducted on a quarterly basis. Replacing and repairing of each pressure transmitters shall not
exceed one hour per day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable
Through Title V Permit
12. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally
Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
13. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

15. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) minimize the leak within 15 calendar days; and 2) if the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Operator shall maintain an inspection log containing the following 1) type of component leaking; 2) date of leak detection, and method of detection; 3) date and emission level of recheck after leak is repaired; 4) identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
24. Vapor control system efficiency shall be determined by a comparison of controlled emissions from all associated emissions units to those emissions which would occur from associated emissions units in the same product service without a vapor control system. Emissions shall be based on emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Tank pressure/vacuum valve shall be inspected on an annual basis. During the pv valve inspections, the pv valve can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of pv valve. [District Rule 2080] Federally Enforceable Through Title V Permit

26. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

29. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3 V}{Q} \] where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

31. Steam cleaning shall be allowed only during December through March unless at a location where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

33. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 26.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

38. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

39. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

40. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of vapor control skid maintenance and voluntary power demand reduction situations, and such records shall be made available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension if necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-867-7
EXPIRATION DATE: 05/31/2007
 SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
210,000 GALLON FIXED ROOF, REJECT OIL TANK (F-103) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-867-7: Sep 30 2011 16:28AM - G000010

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppm whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
Permit Unit Requirements for S-1547-868-5 (continued)

21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-869-6
EXPIRATION DATE: 06/31/2007
SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E
EQUIPMENT DESCRIPTION:
5000 BBL (210,000 GALLON) FIXED ROOF LACT TANK (F-105) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

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16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

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21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-870-5: Sep 29 2011 12:25AM - GOUGH

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-871-6

SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
126,000 GALLON FIXED ROOF RECLAIM OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-872-7
SECTION: NE14   TOWNSHIP: 31S   RANGE: 22E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
126,000 GALLON FIXED ROOF RECLAIM OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865
- NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable
   Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally
   Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning,
   inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V
   Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all
   storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and
   leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V
   Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition.
   [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21,
   with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the
   tank components are found to leak during an annual inspection, the inspection frequency for that component type shall
   be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five
   consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in
   inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform
   when access is required from the platform) locations shall be inspected at least annually and components located in
   unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for
   maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible
   tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is
   repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2]
   Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is
   repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-872-7  Sep 29 2011 10:32AM - GOOOGD
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readable visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = \frac{2.3 V}{Q}$, where $t =$ time, $V =$ tank volume (cubic feet), and $Q =$ flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
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24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 0.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

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 Permit Unit Requirements for S-1547-875-6 (continued)  Page 3 of 3

21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERR COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. Flotation unit shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Flotation unit shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Flotation unit shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the vessel to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 3.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-877-4
SECTION: NE14   TOWNSHIP: 31S   RANGE: 22E
EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
INDUCED GAS FLOATATION UNIT WITH VAPOR CONTROL - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Flotation unit shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Flotation unit shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Flotation unit shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the vessel to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3 V}{Q} \] where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 4.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-882-6
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
WEMCO INDUCED GAS FLOTATION UNIT (# M301A) SERVED BY A VAPOR CONTROL SYSTEM (VRS SERVES
PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be operated with a constant liquid level. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017 for Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline shall not exceed 14.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the floatation unit shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the floatation unit and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background from components other than those associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

8. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Floatation unit covers, inspection hatches, etc., shall be closed and maintained leak-free during normal operation except during periods of maintenance, repair, cleaning or power curtailment. [District Rule 2201] Federally Enforceable Through Title V Permit

10. {2604} All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall determine the presence of VOC leaks by EPA Method 21. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. {2620} A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. {2621} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. H2S concentration in tank vapor space shall not exceed 20,000 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Compliance source testing for H2S concentration of tank vapor space shall be conducted annually (or as approved by the District). [District Rule 2201] Federally Enforceable Through Title V Permit

5. H2S concentration in tank vapor space shall be determined by: GC/FPD or ASTM D-3246. [District Rule 1081] Federally Enforceable Through Title V Permit

6. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623, 2.0 and 4.4] Federally Enforceable Through Title V Permit

7. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

9. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

12. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

14. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District Rule 2201] Federally Enforceable Through Title V Permit

19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA
S-1547-884-7: Sep 26 2011 10:04AM - GOUGHD

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Permittee shall maintain monthly records of true vapor pressure (TVP) of liquids stored and H2S concentration of tank vapor space. [District Rule 2201 and District Rule 4623] Federally Enforceable Through Title V Permit

30. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. Note: Formerly S-1511-376.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-888-16
EXPIRATION DATE: 08/31/2007

SECTION: SW2 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:
7500 BBL (315,000 GALLON) FIXED ROOF CRUDE OIL STORAGE TANK F-4304 VENTED TO SHARED VAPOR CONTROL SYSTEM WITH COMPRESSOR(S), PUMP(S), COOLER(S) LIQUID KNOCKOUT(S), PRESSURE VESSEL(S), PIPING TO S-1547-359, AND PIPING TO THE SECTION 32 GAS PLANT (FACILITY S-1543)

PERMIT UNIT REQUIREMENTS

1. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

3. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

4. Permittee shall notify the District Compliance division at least 24 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

5. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V / Q, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

6. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

7. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

8. Prior to reintroducing crude oil/water to the tank, the vapor recovery system shall be operational. The tank may be filled with water to minimize the tank headspace prior to restarting the vapor recovery system. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

9. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

11. The following Dehy 2 permit units shall be tied into the shared vapor recovery system, TEOR S-1547-359: '-888, '-889, '-890, '-891, '-892, '-893, '-894, '-895, '-896, '-897, '-898, '-899, '-902, '-903, '-904, '-905, '-906, '-944, '-945, '-946, '-947, '-948, '-949, '-950, '-951, '-1014, '-1015, '-1019, '-1116, '-1117, '-1119, '-1123, and '-1124. [District Rule 2201] Federally Enforceable Through Title V Permit

12. This vapor recovery system is authorized to receive recovered gas from the Anderson/Fitzgerald Dehydration facility including units S-1547-378, '-379, '-380, '-383, '-407, '-408, '-410, '-411, '-704, '-1100, '-1101, '-1102, '-1106, '-1115, and '-1121. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. VOC fugitive emissions from this tank and tank vapor control system including vapor control system trunk line prior to intertie with TEOR S-1547-359 shall not exceed 96.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall maintain with the permit accurate fugitive component counts for tank and tank vapor control system, including vapor control system trunk line, according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA’s protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]

16. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

17. The operator shall keep accurate records of types, storage temperature and true vapor pressure of liquids stored. [District Rule 4623] Federally Enforceable Through Title V Permit

18. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 & 4623, 5.6.1] Federally Enforceable Through Title V Permit

19. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during interior tank cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

20. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

21. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit

22. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

23. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
24. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7.9 (Table 3)] Federally Enforceable Through Title V Permit

26. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit or District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

28. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

29. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

32. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-398.
PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

2. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oil pad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
7. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

8. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

9. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

10. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

11. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

12. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

13. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank shall vent to vapor collection system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Vapor collection and vapor control systems shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

17. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

18. Any tank gauging or sampling device on a tank vented to the vapor collection system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

19. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

20. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

21. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

22. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

28. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor collection system compressor activation and shut off pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief setting(s). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Note: Formerly S-1511-399.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 8.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-409
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 7.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-410
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201 Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 6.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-411
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained gas-tight, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor control system shall not exceed 6.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-412
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-896-7
EXPIRATION DATE: 05/31/2007
SECTION: SW02 TOWNSHIP: 29S RANGE: 21E
EQUIPMENT DESCRIPTION:
13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4005 VENTED TO SHARED VAPOR CONTROL SYSTEM
LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE

PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 7.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-413
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-414
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 22.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-415
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 12.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count for the vapor recovery system and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.12] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-416
PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 6.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

8. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Note: Formerly S-1511-424 Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-903-7

EXPIRATION DATE: 05/31/2007

SECTION: SW02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
25,908 GALLON INDUCED STATIC FLOATATION CELL D-4501 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE

PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. An operational flow check valve shall be operational downstream of the IFS dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

5. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 12.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, induced static floatation cell shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Any induced static floatation cell gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Note: Formerly S-1511-425
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-904-7
EXPIRATION DATE: 05/31/2007

SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
25,908 GALLON INDUCED STATIC FLOATATION CELL D-4502 VENTED TO SHARED VAPOR CONTROL SYSTEM
LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE

PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of
   vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program.
   [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during
   periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction
   program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system
   shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. An operational flow check valve shall be operational downstream of the IFS dome gas separator. [District Rule 2201]
   Federally Enforceable Through Title V Permit

5. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed
   11.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas
   production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District
   Rule 2201] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, induced static floatation cell shall be maintained leak free. [District Rules
   2201 & 2520] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a
   leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of
   10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the
   procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of
    this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Any induced static floatation cell gauging or sampling device shall be equipped with a leak-free cover which shall be
    closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V
    Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
12. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Note: Formerly S-1511-426

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-905-7
SECTION: SW02 TOWNSHIP: 29S RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
25,908 GALLON INDUCED STATIC FLOATATION CELL D-4503 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE

PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. An operational flow check valve shall be operational downstream of the IFS dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

5. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 4531R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, induced static floatation cell shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Any induced static floatation cell gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN-COUNTY, CA
S-1547 905-7: Sep 29 2011 12:15AM - Gough
12. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Note: Formerly S-1511-427
PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 14.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count for the vapor recovery system and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, FWKO shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

10. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

11. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

22. Note: Formerly S-1511-431
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-907-3
SECTION: 35   TOWNSHIP: 12N   RANGE: 24W
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
138,900 GALLON SAND BASIN, LONGITUDINALLY DIVIDED INTO TWO CELLS, TOTAL LIQUID HOLDING AREA NOT TO EXCEED 72 FT. BY 46 FT., WITH DEWATERING EQUIPMENT, AND MISC. ELECTRIC PUMPS, TOTAL RATING LESS THAN 100 HP. - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Basin shall be used solely for separation of solids from liquids derived from MOCO facility treating vessels during normal operations. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed the following: VOC - 19.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Sand basin shall not operate as a sump as defined by Rule 4402. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Note: Formerly S-1511-432
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-949-10
SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
5000 BBL (210,000 GALLON) FIXED ROOF CRUDE OIL STORAGE TANK F-4301 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 10.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

7. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
11. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
19. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and
minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before
commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor
recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower
expansion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by
displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank
with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are
organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude
oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing
VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a
suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3
times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent
VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water
and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5]
Federally Enforceable Through Title V Permit

20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an
APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway,
may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally
Enforceable Through Title V Permit

22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining,
degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5]
Federally Enforceable Through Title V Permit

23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not
applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District
Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with
an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents
with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the
months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

26. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall
control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces
emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

27. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge
in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

28. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until
final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule
4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored
in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain
documentation of their compliance with Rule 2020, and shall readily make said documentation available for District
inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

29. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the
planned activities submitted along with the tank cleaning notification requirements specified within this permit.
[District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for
inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V
Permit
31. Note: Formerly S-1511-509.
PERMIT UNIT REQUIREMENTS

1. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

7. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
19. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

26. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

27. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

28. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

29. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Note: Formerly S-1511-510.
PERMIT UNIT REQUIREMENTS

1. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

7. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
11. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
19. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5]

Federally Enforceable Through Title V Permit

20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

26. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

27. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

28. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

29. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Note: Formerly S-1511-511.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1511-551
PERMIT UNIT REQUIREMENTS

1. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 8.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

7. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
11. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
19. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

26. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

27. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

28. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

29. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. Note: Formerly S-1511-659
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-1015-10  
SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:  
7500 BBL (315,000 GALLON) FIXED ROOF CRUDE OIL STORAGE TANK F-4307 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

7. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a leak-free condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

10. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC  
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-1015-10: Sep 28 2011 12:00PM - GOVHELP
11. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

14. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
19. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

20. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

21. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

22. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

23. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

24. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

25. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

26. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

27. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

28. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

29. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
31. Note: Formerly S-1511-660
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1016-5
EXPIRATION DATE: 06/30/2007
SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E
EQUIPMENT DESCRIPTION:
12 FT. DIA. X 60 FT. LONG FREE WATER KNOCKOUT VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. FWKO vessel shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO vessel shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

3. FWKO vessel shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) Use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in collected FWKO vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1017-5
EXPIRATION DATE: 05/31/2007

SECTION: NE14 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:
12 FT. DIA. X 60 FT. LONG FREE WATER KNOCKOUT VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. FWKO vessel shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO vessel shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

3. FWKO vessel shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \) where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNITS REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 0.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in collected FWKO vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
Permit Unit Requirements

1. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit
5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and leak-free except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AEFtA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the ISF dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operational pressure/vacuum vent and a vapor balanced system. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 17.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any induced static floatation cell gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-671
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1025-6

SECTION: NE35   TOWNSHIP: 12N   RANGE: 24W

EQUIPMENT DESCRIPTION:
WEMCO MODEL 120X INDUCED GAS FLOATATION UNIT SERVED BY A VAPOR CONTROL SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Rule 2201 unit shall be operated with a constant liquid level. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017 for Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline shall not exceed 14.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the floatation unit shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the floatation unit and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District Rule 2201] Federally Enforceable Through Title V Permit

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background from components other than those associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

8. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Floatation unit covers, inspection hatches, etc., shall be closed and maintained leak-free during normal operation except during periods of maintenance, repair, cleaning or power curtailment. [District Rule 2201] Federally Enforceable Through Title V Permit

10. {2604} All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall determine the presence of VOC leaks by EPA Method 21. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. {2620} A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. {2621} An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
2. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacture's listed scrubbing efficiency. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
6. Tank shall vent all HCl fumes to operational fume scrubber at all times during filling. [District Rule 4102]
7. Deliveries shall not exceed 15,000 gallons of hydrochloric acid per day. [District Rule 4102]
8. Tank throughput shall not exceed 1,800,000 gallons per year of HCl. [District Rule 4102]
9. Permittee personnel shall be present during all acid deliveries to verify storage tank has sufficient outage to receive the volume of acid to be delivered, that all acid unloading connections are secured, and that the unloading air pressure does not exceed 25 psig. [District Rule 4102]
10. Permittee shall keep records of maintenance inspections, acid delivery dates and volumes delivered. All records shall be retained for a minimum of five years. Records shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
11. Formerly permit unit #S-1511-680.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-170
Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE.KERN COUNTY, CA

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1043-2
EXPIRATION DATE: 05/31/2007
SECTION: NE34  TOWNSHIP: 29S  RANGE: 21E
EQUIPMENT DESCRIPTION:
1000 BBL (42,000 GALLON) FIXED ROOF CRUDE OIL PRODUCTION TANK #CY34WT1.

PERMIT UNIT REQUIREMENTS

I. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-167

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1044-2
SECTION: NE34  TOWNSHIP: 29S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
1000 BBL (42,000 GALLON) FIXED ROOF CRUDE OIL PRODUCTION TANK #1GM58.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-168
San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-1045-2

SECTION: NE34 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
1000 BBL (42,000 GALLON) FIXED ROOF CRUDE OIL PRODUCTION TANK.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-169

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT: S-1547-1100-7
SECTION: SE26 TOWNSHIP: 29S RANGE: 21E
EQUIPMENT DESCRIPTION:
55,000 GALLON FREE-WATER KNOCKOUT VESSEL (V-200) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1547-704(AF DEHY)

PERMIT UNIT REQUIREMENTS

1. Vessel shall vent only to vapor control system listed in S-1547-704. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

3. FWKO vessel cleaning shall not exceed once per calendar quarter and records (time & date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Fugitive VOC emission rate shall not exceed 5.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for equipment according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]

6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17 and 3.18] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2]

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070]
PERMIT UNIT REQUIREMENTS

1. Vessel shall vent only to vapor control system listed in S-1547-704. [District Rule 2201]

2. FWKO covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201]

3. FWKO vessel cleaning shall not exceed once per calendar quarter and records (time & date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2201]

4. Fugitive VOC emission rate shall not exceed 5.4 lb/day. [District Rule 2201]

5. Permittee shall maintain with the permit accurate fugitive component counts for equipment according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]

6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, 3.18] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070]
PERMIT UNIT REQUIREMENTS

1. Vessel shall vent only to vapor control system listed in S-1547-704. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO covers, inspection hatches, etc. shall be maintained in leak-free (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

3. FWKO vessel cleaning shall not exceed once per calendar quarter and records (time & date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Fugitive VOC emission rate shall not exceed 5.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for equipment according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, 3.18] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070]
PERMIT UNIT REQUIREMENTS

1. Collected vapors shall be discharged to the field gas gathering system, TEOR System S-1547-1079, or TEOR System S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

2. VOC emission rate from components shall not exceed 15.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4 or other District-approved emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
9. A leak-free condition is defined as a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623, 3.11, 3.17, 3.18] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1110-1

EQUIPMENT DESCRIPTION:
7,000 GALLON HYDROCHLORIC ACID STORAGE TANK (T19-12) WITH FUME SCRUBBER - SECTION 27 WATER PLANT

PERMIT UNIT REQUIREMENTS

1. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
2. Tank fume scrubber shall be operated while adding HCl into the storage tank. [District Rule 4102]
3. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
4. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
5. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacture's listed scrubbing efficiency. [District Rule 4102]
6. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1111-1
EXPIRATION DATE: 05/31/2007
SECTION: SE19 TOWNSHIP: 26S RANGE: 21E
EQUIPMENT DESCRIPTION:
15,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - LOST HILLS TWO LEASE

PERMIT UNIT REQUIREMENTS

1. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
2. Tank fume scrubber shall be operational while adding HCl into the storage tank. [District Rule 4102]
3. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
4. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
5. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacturer's listed scrubbing efficiency. [District Rule 4102]
6. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1113-1
SECTION: 27  TOWNSHIP: 28S  RANGE: 21E
EQUIPMENT DESCRIPTION:
10,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - SECTION 27 WATER PLANT

PERMIT UNIT REQUIREMENTS

1. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
2. Tank fume scrubber shall be operated while adding HCl into the storage tank. [District Rule 4102]
3. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
4. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
5. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacturer's listed scrubbing efficiency. [District Rule 4102]
6. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1114-1
SECTION: SW28  TOWNSHIP: 28S  RANGE: 21E
PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]

3. Tank shall vent only to vapor control system consisting of gas gathering system. [District Rule 2201]

4. The tank and tank vapor recovery system, including all piping, valves, and fittings shall be maintained in a leak-free (as defined by Rule 4623) condition. [District Rule 4623]

5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects the VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rule 2201 & 4623]

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. When storing liquids with a true vapor pressure greater than 0.5 psia, a reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]

7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]

8. The tank shall be equipped with a vapor loss prevention system capable of collecting the VOC emissions and preventing their emissions to the atmosphere at an efficiency of at least 99% by weight. [District Rule 2201 and 4623]

9. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this permit. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]

12. Any component leak shall be repaired to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2201]

13. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]

14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2]

15. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2201]

16. VOC fugitive emissions from the components in gas service on tank and tank vapor control system, including vapor control system trunk line, shall not exceed 40.8 lb/day. [District Rule 2201]

17. Permittee shall maintain with the permit accurate fugitive component counts for tank and tank vapor control system, including vapor control system trunk line, according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1115-3
SECTION: SE 26 TOWNSHIP: 29S RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
25,900 GALLON INDUCED STATIC FLOTATION CELL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-704 (A/F DEHY)

PERMIT UNIT REQUIREMENTS

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN COUNTY, CA
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. This permit authorizes induced static flotation unit cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall conduct induced static flotation unit cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Induced static flotation unit may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall notify the District Compliance division at least 48 hours before induced static flotation unit cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the induced static flotation unit to allow cleaning the following procedures must be followed: Operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the induced static flotation unit to the maximum extent feasible prior to opening the induced static flotation unit. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Prior to opening the induced static flotation unit to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the induced static flotation unit has been drained to the maximum extent feasible, 2) displace vapors floating the oil pad off with water such that 90% of the induced static flotation unit liquid capacity is displaced, 3) vent the induced static flotation unit to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the induced static flotation unit to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = induced static flotation unit volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit
20. The induced static flotation unit shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. Sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to reintroducing crude oil/water to the induced static flotation unit, the induced static flotation unit shall be filled to the maximum possible level with water or an organic liquid with a TVP less than 0.5 psia, the tank vapor control system shall be reactivated, and the liquid level shall be adjusted as necessary. Pressure/relief valve shall not open during filling of the induced static flotation unit. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Within 48 hours after refilling the induced static flotation unit with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of each period of cleaning and maintenance when the induced static flotation unit is disconnected or isolated from the vapor control system. Records shall include the date that induced static flotation unit cleaning was initiated, the date induced static flotation unit cleaning was completed, the method of induced static flotation unit cleaning used, and a description of internal and external induced static flotation unit repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

25. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1116-1
SECTION: SW02 TOWNSHIP: 29S RANGE: 21E
EQUIPMENT DESCRIPTION:
UP TO 106,200 GALLON FWKO D-4008 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888

PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-
free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.5 lb/day. [District Rule 2201]

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rule 2201] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the ISF dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basin permitted as S-1547-842 or transferred offsite. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 10.0 lb/day. [District Rule 2201]

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any induced static floatation cell gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]
San Joaquin Valley 
Air Pollution Control District

PERMIT UNIT: S-1547-1121-3
SECTION: 26 TOWNSHIP: 29S RANGE: 21E
EXPIRATION DATE: 05/31/2007

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Any component found to be in non-compliance with the leak-free requirement shall be repaired to a leak-free condition within 15 days of detection. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Vessel shall be designed and maintained to vent only to vapor control system listed on permit S-1547-704, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC emissions from vapor recovery components associated with this vessel shall not exceed 6.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All piping, fittings, and valves directly affixed to the tank or associated with the tank vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Permittee shall maintain an accurate fugitive component count for the vessel and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

14. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1122-2
SECTION: SW27  TOWNSHIP: 28S  RANGE: 21E
EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
UP TO 104 HEAVY OIL TEST STATIONS (HOTS), CLOSED PIPING SYSTEM, AND ONE OR MORE PRESSURE VESSEL TEST TANK(S)

PERMIT UNIT REQUIREMENTS

1. Total VOC fugitive emission rate from HOTs equipment shall not exceed 452.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from FWKO and a VOC control device. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO shall be designed and maintained to vent only to vapor control system S-1547-888 and an operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The operator shall ensure that the vapor control system is functional and is operating as designed at all times and shall monitor vapor control compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. VOC emission rate from vapor control components associated with this emissions unit shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall notify the District Compliance division at least 48 hours before FWKO cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the vessel. [District Rule 2080] Federally Enforceable Through Title V Permit
20. Prior to opening the FWKO to allow cleaning the following procedures must be followed: Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the FWKO to the maximum extent feasible prior to opening the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Prior to opening the FWKO to allow FWKO cleaning one of the following options must be followed: 1) operate the vapor control system for at least 24 hours after all the liquid in the FWKO has been drained to the maximum extent feasible, 2) displace vapors floating the oil pad off with water such that 90% of the FWKO liquid capacity is displaced, 3) vent the FWKO to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = FWKO volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

22. The FWKO shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 °F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. Sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Prior to reintroducing crude oil/water to the FWKO, the FWKO unit shall be filled to the maximum possible level with water or an organic liquid with a TVP less than 0.5 psia, the vessel vapor control system shall be reactivated, and the liquid level shall be adjusted as necessary. Pressure/relief valve shall not open during filling of the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular vessel maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-1124-1  
EXPIRATION DATE: 06/30/2007

SECTION: SW2  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
12 FT DIA X 65 FT SHELL LENGTH 55,000 GALLON FREE WATER KNOCKOUT VESSEL VENTED TO SHARED 
VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from FWKO and a VOC control device. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO shall be designed and maintained to vent only to vapor control system S-1547-888 and an operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The operator shall ensure that the vapor control system is functional and is operating as designed at all times and shall monitor vapor control compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. VOC emission rate from vapor control components associated with this emissions unit shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
9. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall
be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with
methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak
during an annual inspection, the inspection frequency for that component type shall be changed from annual to
quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the
inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet
above ground when access is required from the ground or over 6 feet away from a platform when access is required
from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be
inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and
repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible
tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is
repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2]
Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is
repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or
which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520,
9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40
CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within
fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator
demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any
vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control
efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through
Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for
repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized
still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak
during the next process unit turnaround, but in no case later than one year from the date of the original leak detection.
A critical process unit is any process unit which would result in the automatic shutdown of other process units if it
were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak
detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and
location of essential parts of critical process units found leaking that cannot be repaired until the next process unit
turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be
repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine
maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedure
as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures
as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall notify the District Compliance division at least 48 hours before FWKO cleaning and vapor control
system disconnection and within 72 hours after restoring crude oil flow to the vessel. [District Rule 2080] Federally
Enforceable Through Title V Permit
20. Prior to opening the FWKO to allow cleaning the following procedures must be followed: Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the FWKO to the maximum extent feasible prior to opening the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Prior to opening the FWKO to allow FWKO cleaning one of the following options must be followed: 1) operate the vapor control system for at least 24 hours after all the liquid in the FWKO has been drained to the maximum extent feasible, 2) displace vapors floating the oil pad off with water such that 90% of the FWKO liquid capacity is displaced, 3) vent the FWKO to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = FWKO volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

22. The FWKO shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. Sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Prior to reintroducing crude oil/water to the FWKO, the FWKO unit shall be filled to the maximum possible level with water or an organic liquid with a TVP less than 0.5 psia, the vessel vapor control system shall be reactivated, and the liquid level shall be adjusted as necessary. Pressure/relief valve shall not open during filling of the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular vessel maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1127-1
EXPIRATION DATE: 05/31/2007
EQUIPMENT DESCRIPTION:
11,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - SECTION 2 WATER PLANT

PERMIT UNIT REQUIREMENTS

1. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
2. Tank fume scrubber shall be operated while adding HCl into the storage tank. [District Rule 4102]
3. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
4. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
5. Fresh scrubber liquid (water) shall be added per manufacturer's recommendations to maintain a scrubbing efficiency of at least 99%. [District Rule 4102]
6. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]
PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC emissions shall not exceed the following 0.006 lb/sq ft-day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The sand basin surface area shall not exceed 2,500 sq.ft. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit
EXPIRATION DATE: 06/30/2007

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1138-2

EQUIPMENT DESCRIPTION:
ONE 150,000 GALLON OILFIELD PRODUCTION SAND BASIN. - (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC emissions shall not exceed the following 0.006 lb/sq ft-day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The sand basin surface area shall not exceed 2,500 sq.ft. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1152-2
EXPIRATION DATE: 06/30/2007

EQUIPMENT DESCRIPTION:
51,000 GALLON FREE WATER KNOCKOUT VESSEL D-101B CONNECTED TO VAPOR CONTROL SYSTEM IN S-1154-854

PERMIT UNIT REQUIREMENTS

1. FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from FWKO and a VOC control device. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO shall be designed and maintained to vent only to vapor control system S-1547-854. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC emission rate from components in gas and light crude oil service associated with this emission unit shall not exceed 9.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from EPA Publication 453/R-95-017 Protocol for Equipment Leak Emission Estimates Table 2-4 Oil and Gas Production Operations Average Emission Factors (kg/hr/source). [District Rule 2201] Federally Enforceable Through Title V Permit

5. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

6. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. FWKO cleaning shall not exceed once per calendar quarter and records (time and date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall notify the District Compliance division at least 72 hours before FWKO cleaning and vapor control system disconnection. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
EQUIPMENT DESCRIPTION:
2000 BBL (84,000 GALLON) FIXED ROOF CRUDE OIL STORAGE TANK, LACT TANK (F-108) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-854 - LOST HILLS 2 DEHYDRATION FACILITY

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC emissions from this tank shall not exceed 108.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

5. Tank may vent to vapor control system listed on PTO S-1547-854. Tank may be isolated from the vapor control system at any time (e.g. tank cleaning, maintenance, operational demands, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit

6. When tank is connected to vapor control system, operator shall implement the inspection and maintenance program described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves on this vessel shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

8. If any of the vessel components are found to be leaking, operator shall immediately affix a tag and maintain records of liquid leak and gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Comply with the following requirements to repair leaking components that have a gas leak >10,000 ppmv (measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane):
   a. Eliminate the leak within 8 hours after detection; or
   b. If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and
   c. Eliminate the leak within 48 hours after minimization; and
   d. In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If a component type for a given vessel is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623, 6.2.2] Federally Enforceable Through Title V Permit

14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.1] Federally Enforceable Through Title V Permit


16. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

17. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

18. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP and API gravity. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

19. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1160-4
SECTION: 19  TOWNSHIP: 26S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
2000 BBL (84,000 GALLON) FIXED ROOF CRUDE OIL STORAGE TANK, LACT TANK (F-109) SERVED BY VAPOR
CONTROL SYSTEM LISTED ON S-1547-854 - LOST HILLS 2 DEHYDRATION FACILITY

PERMIT UNIT REQUIREMENTS

1. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable
   Through Title V Permit

2. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable
   working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good
   operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when
   the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V
   Permit

3. VOC emissions from this tank shall not exceed 108.2 lb/day. [District Rule 2201] Federally Enforceable Through Title
   V Permit

4. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all
   storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

5. Tank may vent to vapor control system listed on PTO S-1547-854. Tank may be isolated from the vapor control
   system at any time (e.g. tank cleaning, maintenance, operational demands, etc.). [District Rule 2201] Federally
   Enforceable Through Title V Permit

6. When tank is connected to vapor control system, operator shall implement the inspection and maintenance program
   described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves on this vessel shall be inspected annually by the facility operator in accordance with
   EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this
   permit. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated
   tanks for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

8. If any of the vessel components are found to be leaking, operator shall immediately affix a tag and maintain records of
   liquid leak and gas leak detection readings, date/time leak was discovered, and date/time the component was repaired
   to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall
   repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking
   component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title
   V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERX ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-1160-4: Sep 29 2011 10:55 AM - GEOUSO
10. Comply with the following requirements to repair leaking components that have a gas leak >10,000 ppmv (measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane): a. Eliminate the leak within 8 hours after detection; or b. If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and c. Eliminate the leak within 48 hours after minimization; and d. In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If a component type for a given vessel is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623, 6.2.2] Federally Enforceable Through Title V Permit

14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623, 6.2.1] Federally Enforceable Through Title V Permit


16. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4] Federally Enforceable Through Title V Permit

17. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

18. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP and API gravity. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

19. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623, 6.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall vent only to the vapor control system listed on S-1547-707. [District Rule 2080] Federally Enforceable Through Title V Permit

2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall vent only to the vapor control system listed on S-1547-707. [District Rule 2080] Federally Enforceable Through Title V Permit

2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule2080] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall vent only to the vapor control system listed on S-1547-442. [District Rule 2080] Federally Enforceable Through Title V Permit
2. The tank and all piping, valves and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit
3. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit
4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit
5. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
6. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
7. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
8. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

10. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall vent only to the vapor control system listed on S-1547-442. [District Rules 2080] Federally Enforceable Through Title V Permit

2. The tank and all piping, valves and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

3. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

5. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

6. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

7. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

8. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

10. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1206-1
SECTION: 35  TOWNSHIP: 12N  RANGE: 24W
EQUIPMENT DESCRIPTION:
2,040 BBL FWKO VESSEL (D-101A) CONNECTED TO TANK VAPOR CONTROL SYSTEM S-1547-843 (MOCO)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall vent only to the vapor control system listed on S-1547-843. [District Rule 2080] Federally Enforceable Through Title V Permit

2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1207-1
SECTION: 35 TOWNSHIP: 12N RANGE: 24W
EQUIPMENT DESCRIPTION:
2,040 BBL FWKO VESSEL (D-101B) CONNECTED TO TANK VAPOR COLLECTION SYSTEM S-1547-843 (MOCO)

PERMIT UNIT REQUIREMENTS

1. The pressure vessel shall vent only to the vapor control system listed on S-1547-843. [District Rule 2080] Federally Enforceable Through Title V Permit

2. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

3. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

4. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

5. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

7. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

13. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This tank may be operated to store chemicals for the treatment of produced fluids from facilities S-1547 and S-1548. [District Rule 2080]

2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

3. Tank shall be equipped with an operational temperature indicator. [District Rule 2201]

4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]

5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623]

6. This tank shall be in a leak-free condition. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623. [District Rule 4623]

7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623]

8. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201]

9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not to exceed 2.1 psia under all storage conditions. [District Rules 2201 and 4623]

10. Tank throughput shall not exceed 234,000 gallon per year. [District Rule 2201]

11. Tank throughput shall not exceed 6,500 gallon per day. [District Rule 2201]

12. VOC emission rate from the tank shall not exceed 2.7 lb/day [District Rule 2201]

13. True vapor testing (TVP) testing to demonstrate compliance with Rule 4623 shall be conducted within 60 days of startup, and once every 24 months during summer (July - September) thereafter. [District Rules 1081 and 4623]

14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623, 6.2.1.2]
15. The permit holder shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2]

16. The true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of the "California Air Resources Board's (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588," dated August 1989. [District Rule 4623, 6.4.3]

17. In lieu of testing each uncontrolled fixed roof tank, the permit holder may conduct a TVP testing of the organic liquid stored in a representative tank provided the following requirements are met: (1) the selection of representative, uncontrolled fixed roof tanks shall be submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) one uncontrolled fixed roof tank represents some or all of the tanks in a tank battery (as defined in Rule 4623, Section 3.31, Amended 5/19/05); (3) the TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent; and (4) the stored organic liquid in each of the represented tanks is the same and came from the same source. [District Rule 4623, 6.2.1.1]

18. An operator shall submit the records of TVP testing conducted in accordance with the testing requirements of Rule 4623, 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6]

19. Permittee shall maintain accurate records of tank throughput, true vapor pressure and temperature of liquid in the tank, inspection log and such records shall be retained on-site for a minimum of five (5) years and made available for APCO upon request, except for certain records that need to be submitted as specified in this permit. [District Rules 2201 and 4623]
PERMIT UNIT REQUIREMENTS

1. This tank may be operated to store chemicals for the treatment of produced fluids from facilities S-1547 and S-1548. [District Rule 2080]

2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

3. Tank shall be equipped with an operational temperature indicator. [District Rule 2201]

4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]

5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623]

6. This tank shall be in a leak-free condition. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623. [District Rule 4623]

7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623]

8. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201]

9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not to exceed 2.1 psia under all storage conditions. [District Rules 2201 and 4623]

10. Tank throughput shall not exceed 234,000 gallon per year. [District Rule 2201]

11. Tank throughput shall not exceed 6,500 gallon per day. [District Rule 2201]

12. VOC emission rate from the tank shall not exceed 2.7 lb/day [District Rule 2201]

13. True vapor testing (TVP) testing to demonstrate compliance with Rule 4623 shall be conducted within 60 days of startup, and once every 24 months during summer (July - September) thereafter. [District Rules 1081 and 4623]

14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623, 6.2.1.2]
15. The permit holder shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2]

16. The true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of the "California Air Resources Board's (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588," dated August 1989. [District Rule 4623, 6.4.3]

17. In lieu of testing each uncontrolled fixed roof tank, the permit holder may conduct a TVP testing of the organic liquid stored in a representative tank provided the following requirements are met: (1) the selection of representative, uncontrolled fixed roof tanks shall be submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) one uncontrolled fixed roof tank represents some or all of the tanks in a tank battery (as defined in Rule 4623, Section 3.31, Amended 5/19/05); (3) the TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent; and (4) the stored organic liquid in each of the represented tanks is the same and came from the same source. [District Rule 4623, 6.2.1.1]

18. An operator shall submit the records of TVP testing conducted in accordance with the testing requirements of Rule 4623, 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6]

19. Permittee shall maintain accurate records of tank throughput, true vapor pressure and temperature of liquid in the tank, inspection log and such records shall be retained on-site for a minimum of five (5) years and made available for APCO upon request, except for certain records that need to be submitted as specified in this permit. [District Rules 2201 and 4623]
TEOR WELLS
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Vapor collection and control system can receive vapors from tank vapor control system S-1547-888, TEOR system S-1547-1079, free water knockout vessel S-1547-1104, and degassing operation S-1547-1141. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor collection system shall include 2 sulfur scrubbing systems using District approved scrubbing agents. Scrubber(s) may be by-passed only when incinerating vapors in scrubbed steam generator S-1547-47. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Scrubbed gases shall be incinerated in steam generators S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837. Alternatively, the wells can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Unscrubbed vapor may be routed to the Sec. 32 Belridge gas plant (S-1543-4) via the Del Sur gas gathering system (compressors S-1578-433, '-434, '-435 and emergency flare S-1548-134). [District Rule 2201] Federally Enforceable Through Title V Permit

5. Vapor collection system shall be equipped with heat exchangers, gas/liquid separators with vane-type mist eliminators, 2 gas compressors, compressor discharge knock-outs, and liquid pumps. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All produced fluids from any well served by vapor collection system which has had the casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The regeneration vessel air vent at each sulfur scrubbing system may be vented to atmosphere provided daily emissions from each vent shall not exceed 2.0 lbs VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall determine VOC content of the exhaust at each regeneration vessel air vent semi-annually. If a semi-annual VOC content analysis fails to show compliance, the regeneration vessel air vents shall be tested once per week. If compliance with the VOC content limit has been demonstrated for eight consecutive weeks, then the VOC content testing frequency shall revert to semi-annually. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Total mass flowrate of sulfur compounds in gas leaving sulfur removal systems shall not exceed 336.92 lb/day as sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-359-20: Sep 24 2011 1:43PM — GOUGHD
11. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,888.1 lb/day (including regeneration vessel air vents). [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall maintain accurate records of sulfur content and daily vapor flow rate of all uncondensed vapors sent to approved incineration devices (S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837) for disposal. Such records shall be maintained readily available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

14. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. The total number of cyclic wells on this Permit shall not exceed 5 and shall be located more than 1,000 feet from an existing well vent vapor control system operated by permittee, and the operation shall be under District permit. [District Rule 4401, 4.4] Federally Enforceable Through Title V Permit

2. An accurate roster of all cyclic wells on this Permit shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request [District Rules 2201 and 4401, 4.4] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-638-11

EQUIPMENT DESCRIPTION:
396 CLOSED VENT CYCLIC WELLS AND 5,384 CLOSED VENT STEAM DRIVE WELLS. (WESTSIDE)

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells with closed-casing vents, and such listing shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

2. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

3. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 4401, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Operation shall include non-condensible vapor piping from vapor recovery skids to balanced system. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Collected vapors from well casing vents shall be sent to the approved incineration devices listed on this permit. Alternatively, the wells can be operated with the casing vents shut-in or collection system "balanced" by tying the casing vents together and letting the pressure balance between the well-head casing vents. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Operation shall include vapor control equipment which consists of miscellaneous knockout vessels & liquid removal pumps, heat exchangers and vapor compressors. [District Rule 2201] Federally Enforceable Through Title V Permit

4. All produced fluids from any well served by vapor collection system which has had casing gas flow restricted or casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Water/VOC condensate from all liquid knockout drums shall be pumped to the production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Fugitive VOC emissions from this equipment and shared vapor control system shall not exceed 41.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Permittee shall maintain with the permit accurate fugitive component counts for this equipment and shared vapor control system, including vapor control system trunk line, according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit


10. Uncondensable gases shall only be controlled by one or more of the following options: 1) incineration in scrubbed steam generators S-1547-1, -3, -141, -142, -143, or -144; 2) incineration in standby flare S-1547-414; or 3) transmitted to Section 2 Dehydration facility (S-1547-888). [District Rule 2201] Federally Enforceable Through Title V Permit

11. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-707-4

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION SYSTEM SERVING 37 STEAM-DRIVE CRUDE OIL PRODUCTION WELLS, LIQUID KNOCKOUT SEPARATOR(S), COOLER(S), VAPOR COMPRESSOR(S), VAPOR COLLECTION PIPING AND PIPING FROM INLET SEPARATOR VESSELS (D&E)

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with permit a current listing of all steam enhanced wells connected to this TEOR system and shall make such listing readily available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

2. Steam enhanced oil production wells connected to this TEOR system shall either vent to TEOR systemS-1547-819 or be injected into Department of Oil Gas and Geothermal Resources (DOGGR) approved well(s). [District Rule 2201] Federally Enforceable Through Title V Permit

3. In the event of failure of any components in the vapor control system, gas flow from all wells served by this vapor control system shall be stopped by closing valve upstream of separator vessel or shall be directed through the vapor control system valves and piping which bypass the failed equipment and to the authorized steam generators. During periods when gas flow from wells is stopped, produced fluids shall be directed to tanks S-1547-843 through '-853, and '-884. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

5. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-708-6
SECTION: NE35 TOWNSHIP: 32S RANGE: 23E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION SYSTEM SERVING FORTY-THREE (43) STEAM ENHANCED OIL PRODUCTION WELLS. (NATIONAL)

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with this permit a current listing of all steam-enhanced wells connected to this TEOR system and shall make the list readily available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

2. VOC content of the casing gas shall not exceed 10% by weight and shall be tested annually. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

4. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-708-6, Sep 2011 1:43PM - GCJGUH9D
PERMIT UNIT REQUIREMENTS

1. Operation shall include fin fan heat exchanger and its associated components. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The VOC content of the gas going through the fin fan heat exchanger and its associated components shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Operator shall conduct quarterly gas sampling for gas going through the fin fan heat exchanger and its associated components to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. Quarterly sampling shall be reduced to annual sampling if gas samples contain VOC content equal to or less than 10% by weight for eight (8) consecutive quarterly sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC content of gas going through the fin fan heat exchanger and its associated components shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain a record of the VOC content test results for the gas going through the fin fan heat exchanger and its associated components for a period of five years and make such records available for inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Operation shall include vapor collection piping network serving District approved tanks at Lost Hills oil treatment plants. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Operation shall include vapor collection piping network serving District approved oil/water separation systems at Lost Hills oil treatment plants. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Operation shall include miscellaneous liquid knockout vessels (separators), heat exchangers, and vapor compressors. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Operation shall include vapor collection piping line interconnections and non-condensible casing gas piping to sulfur scrubbing systems. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Operation shall include at least one and no more than two sulfur scrubbing systems, each consisting of casing gas coolers and pumps, concurrent contactor vessels and separators, and chemical storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Sulfur scrubbing system shall use District approved scrubbing agents, including but not limited to Exxon Sulfa Check, DOW Sulferox, WESCHEM Sulfarid, SulfaScrub, SulfaTreat, Caustic-based sulfur scrubbing systems, and Betz DX-1026 Formulations. Prior District approval shall be obtained for using alternative sulfur scrubbing agents not listed. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Scrubber regenerator vessel (if applicable) and sulfur bin ventilation (if applicable) shall, at each sulfur recovery unit, be vented to one or more of the District approved steam generators connected to desulfurized casing gas piping network. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee shall maintain an updated listings (updated annually within 60 days of permit anniversary) of vapor control system equipment and permitted emissions units connected to this vapor control system and such listings shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Non-condensable gas from the vapor control system shall be scrubbed by sulfur scrubbing systems prior to incineration in steam generators S-1547-787 to -796, -825, and -830, or other District approved steam generators for TEOR gas incineration. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Wells producing to vapor-controlled tanks can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit

17. All produced fluids from any well served by vapor collection system which has had its casing vent closed shall be handled only in closed production equipment served by a 99% efficient vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Sulfur scrubbing systems shall be maintained to achieve, on average monthly basis, at least 90% control efficiency of all H2S entering the systems. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Particulate matter (PM10) emissions from TEOR gas incineration shall not exceed 17.1 lb/day (shared with all District approved steam generators). [District Rule 2201] Federally Enforceable Through Title V Permit

21. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,198.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017), or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Permittee shall maintain accurate daily records of gas sulfur content of non-condensable gas entering and leaving sulfur scrubbing systems to verify removal efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit

24. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

25. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

26. Note: Formerly S-1511-22

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-819-6
SECTION: 35  TOWNSHIP: 12N  RANGE: 24W
EXPIRATION DATE: 08/31/2007
PERMIT UNIT REQUIREMENTS

1. Fugitive VOC emissions from all components associated with this operation shall not exceed 410.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall maintain for a period of five years, accurate records of fugitive inspection component counts, leak screening values in excess of 10,000 ppm, and shall, as approved by the District, calculate fugitive emissions using February 1999 CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c. Permittee shall make records of component counts, screening values, and calculations readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Operation shall include liquid knockout vessels (separators), heat exchangers, and vapor compressors. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Operation shall include vapor collection piping network from well vent vapor control system and tank battery vapor control system S-1547-843 to sulfur scrubbing systems (primary & standby). [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain a current roster of wells connected to the casing collection system, and such roster shall be made readily available for District inspection upon request [District Rule 2201] Federally Enforceable Through Title V Permit

6. Primary sulfur scrubbing system shall include casing gas coolers and pumps, contactor vessels and separators, regenerator section with heat exchangers, recirculation pump & air blower, and chemical storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Standby sulfur scrubbing system shall include contactor vessels and separators. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Sulfur scrubbing system(s) shall use District approved scrubbing agents including, Exxon Sulfa Check, DOW Sulfoox, WESCHEM Sulfarid, SulfaScrub, and Betz DX-1026 Formulations. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Prior District approval shall be obtained for using alternative sulfur scrubbing agents other than those listed above. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Casing vapor collection system shall be equipped with vapor flow rate indicator/recorder downstream of condensation and sulfur removal equipment measuring total non-condensible vapor flow rate. [District Rule 2201] Federally Enforceable Through Title V Permit

11. All wells approved by this permit shall have the well head casing vents routed to the TEOR well vent vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Well casing vents may be closed provided produced fluids are handled only in production facilities with District-approved emission control systems achieving at least 99% control. [District Rule 2201 and District Rule 4401] Federally Enforceable Through Title V Permit

13. An inspection and maintenance program consistent with Rule 4403 for light oil production facilities shall be implemented for stuffing boxes and polish rods of 479 newly authorized steam drive wells (identified by well roster). [District Rule 2201] Federally Enforceable Through Title V Permit

14. Sulfur bin ventilation (if applicable) shall be vented to one or more of the District approved steam generators connected to desulfurized casing gas piping network. [District Rule 2201] Federally Enforceable Through Title V Permit

15. During temporary periods of maintenance covered in the permittee's bi-annual maintenance plan the permittee may conduct maintenance or repair activities contained in the District approved bi-annual maintenance plan without shutting-in production from wells served by the well vent vapor collection system, for no more than a total of 336 hours during any one calendar year for each system. Maintenance covered by the permittee’s bi-annual maintenance plan may exceed 336 hours during any one calendar year when maintenance is performed while all casing well vents covered by this permit are closed. When multiple vapor recovery systems serve the same wells in series or in parallel, a total of 336 hours of maintenance shall be allowed for all systems combined. [District Rule 2201] Federally Enforceable Through Title V Permit

16. During temporary periods of maintenance covered in the permittee's bi-annual maintenance plan, well vent vapor recovery piping may be temporarily shut-in or isolated for routine maintenance or repair activities without closing the well vents normally served by a well vent vapor collection system provided that well vent vapors are routed to a vapor recovery system that complies with District rule 4401 and all otherwise applicable provisions of this permit. [District Rule 2201 and District Rule 4401] Federally Enforceable Through Title V Permit

17. Well vent vapor collection system piping and components shall be maintained as required by Rule 4401, and well vent vapors shall not be vented or bled-off to the atmosphere except for those actions necessary to safely isolate vessels and piping for routine maintenance. [District Rule 2201 and District Rule 4401] Federally Enforceable Through Title V Permit

18. The District shall be notified at least 48 hours prior to the start of each maintenance program. No later than 10 days after completing each maintenance episode, the permittee shall notify the District in writing of the date, time, duration, well number(s), and description of the maintenance or repair activity completed. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of the date, time, and duration of each maintenance or repair episode requiring the temporary isolation of well vent vapor recovery piping. Such records shall include well identification numbers and a description of the maintenance or repair activity completed, and shall be maintained for a period of up to 5 years, and be made readily available to the District upon request. [District Rule 2201 and District Rule 1070] Federally Enforceable Through Title V Permit

20. Permittee shall submit to the District bi-annual maintenance plans. The maintenance plan must identify each permit unit and illustrate them on a detailed map of the system, identify the period and duration of each maintenance episode for each system, an estimate of VOC emissions released during maintenance, and the procedures that will be used to maintain and isolate affected equipment. [District Rule 2201] Federally Enforceable Through Title V Permit

21. If unscrubbed sulfur rate exceeds 109.2 lb S/day, non-condensible gas shall be scrubbed by sulfur scrubbing systems prior to incineration in steam generators S-1547-766 to '772, '777 to '781, or other District approved steam generators. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Liquid condensate from vapor recovery piping, condensation, and sulfur scrubbing systems shall be pumped to production manifold. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Non-condensible gas from vapor control system shall not be vented to atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Maximum gas flow rate from well casing vent vapor control system shall not exceed 4.09 MMscf/day. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-819-6: Sep 28 2011 1:42PM - G5006G

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
25. Total mass flow rate of sulfur compounds from sulfur scrubbing systems shall not exceed 258.0 lb/day as S. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Permittee shall maintain accurate daily records of gas flow rate leaving sulfur scrubbing systems, and sulfur content (by daily gas sampling) of non-condensible gas entering and leaving sulfur scrubbing systems. [District Rule 2201] Federally Enforceable Through Title V Permit

27. If sulfur scrubbing systems are not utilized, permittee shall maintain accurate daily records of total unscrubbed sulfur mass flow rate and sulfur content (by daily gas sampling) of unscrubbed non-condensible gas. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Particulate matter (as PM10) emissions from TEOR gas incineration shall not exceed 55.9 lb/day (shared with all District approved steam generators). [District Rule 2201] Federally Enforceable Through Title V Permit

29. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-213
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-820-2

SECTION: NW14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 324 WELLS SERVED BY VAPOR CONTROL SYSTEM WITH LIQUID KNOCK-OUT VESSELS, HEAT EXCHANGERS, & COMPRESSORS, WITH VAPOR PIPING TO SULFUR SCRUBBING SYSTEM S-1547-822 OR APPROVED INJECTION WELLS. MIDWAY SUNSET

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall include knockout vessels, heat exchangers, and vapor compressors. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All noncondensible vapors from vapor compressor(s) shall be piped to gas injection wells or sulfur scrubbing system S-1547-822 only. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Permittee shall reinject vapors into Department of Oil, Gas, and Geothermal Resources (DOGGR) approved gas injection wells only. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain a current roster of steam enhanced wells and DOGGR approved gas injection wells connected to the casing collection system, and such listing shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Water and VOC condensate from all liquid knockout drums shall be pumped to production system. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emission rate shall not exceed 28.1 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
9. Note: Formerly S-1511-219

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-821-4

SECTION: SW14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 215 WELLS SERVED BY VAPOR CONTROL SYSTEM WITH VAPOR CONTROL PIPING TO SULFUR SCRUBBING SYSTEM S-1547-822 OR APPROVED INJECTION WELLS. MIDWAY SUNSET FIELD.

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall include liquid knockout vessels, heat exchangers, and vapor compressors. [District Rule 2201] Federally Enforceable Through Title V Permit
2. All noncondensible vapors from vapor compressor(s) shall be piped to gas injection wells or sulfur scrubbing system S-1547-822 only. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Permittee shall reinject vapors into Department of Oil, Gas, and Geothermal Resources (DOGGR) approved gas injection wells only. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall maintain a current roster of steam enhanced wells and DOGGR approved gas injection wells connected to the casing collection system, and such listing shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Water and VOC condensate from all liquid knockout drums shall be pumped to production system. [District Rule 2201] Federally Enforceable Through Title V Permit
6. VOC emission rate shall not exceed 3.14 lb/(well x day). [District Rule 2201] Federally Enforceable Through Title V Permit
7. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
9. Note: Formerly S-1511-222

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Uncondensed casing vapors shall be piped to sulfur scrubbing system S-1547-824 or as allowed below. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Water/VOC condensate from all liquid knockout drums shall be pumped to production manifold. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Emissions from the TEOR operation shall not exceed the following limit: VOC - 5.23 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

5. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

6. Note: Formerly S-1511-228
PERMIT UNIT REQUIREMENTS

1. Any changes to the number of uncontrolled cyclically steamed oil production wells in the Western Heavy Oil Stationary Source shall require an Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall maintain current roster of all open vent cyclically steamed wells that have been steamed within the previous 5 years being operated under this permit & such roster shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Well roster shall include identification of all uncontrolled cyclic wells undergoing pilot testing. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Total number of uncontrolled cyclic wells undergoing pilot testing (exempt from control requirements pursuant to Rule 4401 section 4.2) shall not exceed 40. [District Rule 4401, 4.3] Federally Enforceable Through Title V Permit

5. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.2, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401, 4.2.2] Federally Enforceable Through Title V Permit

6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401, 4.2.1] Federally Enforceable Through Title V Permit

7. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401, 3.25] Federally Enforceable Through Title V Permit

8. Note: Formerly S-1511-258
PERMIT UNIT REQUIREMENTS

1. Number of TEOR wells served by vapor control system shall not exceed 69 wells. [District Rule 2201] Federally Enforceable Through Title V Permit

2. VOC emission rate from steam enhanced wells shall not exceed 2.21 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

3. All condensate from each liquid knock-out drum shall be pumped only to production system. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Compliance with Rule 4401 may be achieved by injection of vapor control system gas into Department of Oil, Gas, and Geothermal Resources (DOGGR) approved injection wells. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain a current listing of all steam enhanced wells and DOGGR approved gas injection wells connected to this system and shall make this list readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

6. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

8. Note: Formerly S-1511-445
PERMIT UNIT REQUIREMENTS

1. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 2201] Federally Enforceable Through Title V Permit

2. All produced fluids from all wells authorized by this permit shall be handled only in closed production equipment served by a 99% efficient vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells authorized by this permit and such listing shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Emissions of Volatile Organic Compounds (VOC) shall not exceed 101.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA-453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1079-14
SECTION: 30 TOWNSHIP: 28S RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
THERMALLY-ENHANCED OIL RECOVERY OPERATION WITH 131 STEAM DRIVE WELLS WITH CASING VENT VAPOR COLLECTION AND CONTROL SYSTEM INCLUDING TWO AIR-COOLED HEAT EXCHANGERS AND TWO GAS COMPRESSORS

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapors collected from the well vent vapor collection and control system shall either be piped to the field gas gathering system, or the 2038 or 2972 steam plant (2038 consists of units S-1547-57, 59, 60, 61, 120, and 250; 2972 consists of units S-1547-77, 78, 123, 124, 135, 136, and 146), or TEOR system S-1547-359, or to DOGGR-approved injection wells. Alternatively, the wells can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to productions wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Emissions of volatile organic compounds (VOC) shall not exceed 236.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1209-5
EXPIRATION DATE: 05/31/2007
SECTION: NW 36   TOWNSHIP: 27S   RANGE: 20E

EQUIPMENT DESCRIPTION:
TWO THERMALLY ENHANCED OIL RECOVERY WELLS WITH BEAM-DRIVEN CASING GAS COMPRESSORS
OPERATED WITH PRODUCED GAS ROUTED TO PRODUCED FLUID LINE (BELRIDGE OIL FIELD)

PERMIT UNIT REQUIREMENTS

1. Produced gas shall be routed to produced fluid line prior to entering crude oil storage tanks. [District Rules 2201 and 4401] Federally Enforceable Through Title V Permit

2. All produced fluids (gas, water, oil) from TEOR wells shall be sent to tanks served by a vapor control system with 99% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The VOC content of the casing gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Operator shall conduct quarterly sampling of the well casing gas. If the gas sampled is 10% or less VOC by weight for eight consecutive quarterly sampling, the sampling frequency shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
GAS TURBINES, IC ENGINES, FLARES & GAS DISPENSING OPERATION
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-148-21
SECTION: 32  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #1 WITH GENERAL ELECTRIC MODEL LM2500
PE GAS TURBINE AND UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR

PERMIT UNIT REQUIREMENTS

1. Fuel consumption shall not exceed 5,650 MMBtu/day of fuel gas. [District Rule 2201] Federally Enforceable Through Title V Permit

2. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 19451. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

3. NOx emissions shall not exceed 75 ppmv @ 15% O2 (one-hour rolling average in accordance with 40 CFR 60.13(h)). [40 CFR 60.332(b)] Federally Enforceable Through Title V Permit

4. This is a BARCT Offset emission unit. For the purposes of Actual Emission Reduction calculations only, this unit shall be considered to have NOx emissions of 20.6 ppmv @ 15% oxygen. [District Rule 4501] Federally Enforceable Through Title V Permit

5. Except during startup, shutdown, and reduced load, emission rates (three-hour rolling average) shall not exceed any of the following: NOx: 0.011 lb/MMBtu or 3 ppmv @ 15% O2; and CO: 0.076 lb/MMBtu or 33.9 ppmvd @15% O2. [District Rule 4703, 5.1, 5.2 and 7.2] Federally Enforceable Through Title V Permit

6. Emission rates from the gas turbine engine shall not exceed any of the following: 0.016 lb-PM10/MMBtu, 0.010 lb-SOx/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

7. On days of gas turbine engine startup/shutdown, permittee shall demonstrate compliance with NOx daily emission limitation by records of calculations using CEM data, fuel rate data, and daily hours of operation data. [District Rule 1080] Federally Enforceable Through Title V Permit

8. Maximum daily emission limitations (DEL) shall not exceed any of the following: 56.5 lb-SOx/day, 90.4 lb-PM10/day, 429.4 lb-CO/day, or 45.2 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. The ammonia injection rate shall not exceed 25 lb/hr. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

10. The operator shall monitor the ammonia injection rate during CEM breakdowns to demonstrate NOx emission compliance. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

11. After shakedown, NOx emissions shall not exceed 190.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Shakedown shall be defined as the period from startup to the earlier of the following dates: 60 calendar days after initial startup, 90 calendar days after Major Overhaul, or April 30, 2008. [District Rule 2201 and Rule 4703, 7.2.4] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
Permit Unit Requirements for S-1547-148-21 (continued)  

13. Startup shall be defined as the period of time, not to exceed two hours, during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.29 and 5.3] Federally Enforceable Through Title V Permit

14. Shutdown shall be defined as the period of time, not to exceed two hours, during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.26 and 5.3] Federally Enforceable Through Title V Permit

15. Reduced Load Period shall be defined as the time, not to exceed one hour, during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rule 4703, 3.23 and 5.3] Federally Enforceable Through Title V Permit

16. Major Overhaul shall be defined as taking a stationary gas turbine out of service to replace or repair major components of the turbine. Major overhaul does not include taking a stationary gas turbine out of service exclusively to install emission control equipment. [District Rule 4703, 3.14] Federally Enforceable Through Title V Permit

17. Permittee shall report the following emission exceedances to the District: NOx emission rate on a three-hour average and daily NOx emissions during days of gas turbine engine startup/shutdown or reduced load. [District Rule 1080] Federally Enforceable Through Title V Permit

18. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081] Federally Enforceable Through Title V Permit

19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate daily records of fuel gas consumption and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1081] Federally Enforceable Through Title V Permit

21. The owner or operator shall certify, maintain, operate and quality-assure a system which continuously measures and records the exhaust gas oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, 40 CFR 60.334(b), District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

22. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit

23. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

24. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

25. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inopercative, and emission measurements. [40 CFR 60.7(b), District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

26. Permittee shall submit reports of excess emissions for all periods of unit operation, including startup, shutdown, and malfunction in accordance with 40 CFR 60.344(j). [40 CFR 60.334(j)] Federally Enforceable Through Title V Permit
27. Permittee shall submit a CEMS written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR 60.334(j), (j)(5), District Rule 1080, 8.0 and District Rule 2520, 9.6.1 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

28. Excess emissions shall be defined as any consecutive 2-hour period during which the average emissions of NOx and CO, as measured by continuous monitoring system exceeds the concentration emissions limits set forth for these pollutants. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

29. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

30. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas or natural gas with sulfur content no greater than 0.8% by weight. [40 CFR 60.333] Federally Enforceable Through Title V Permit

32. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of the fuel shall be tested in accordance with 40 CFR 60.344(i). [40 CFR 60.344(i)] Federally Enforceable Through Title V Permit

33. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. [40 CFR 60.335(b), District Rule 4703, 6.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335 and District Rules 1081, 4703, 6.4 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

35. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

36. Performance testing shall be witnessed or authorized by District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

37. Daily records of NOx and CO emission calculations during days of startup/shutdown or reduced load shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

38. CO emissions shall not exceed (lbs/hr) (three-hour average) = 38-(0.2)*(ambient air temperature in oFahrenheit) (not to exceed 30 lbs/hr) and (ppmv) = 1.86*(lbs/hr) @ 15% O2 (not to exceed 55.8 ppmv). [PSD SJ 85-03] Federally Enforceable Through Title V Permit

39. Permittee shall operate and maintain a continuous monitoring system to measure the ambient air temperature. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

40. Permittee shall operate and maintain a water injection system and instrumentation to continuously monitor and record levels of consumption of fuel and water. [PSD SJ 85-03] Federally Enforceable Through Title V Permit
41. EPA Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable PSD emissions limits. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

42. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. Permittee shall maintain records of the following: 1) the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the permit unit; 2) performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS; and 3) emission measurements. [District Rules 1080, 7.3; 2520, 9.4.2; 4703, 6.2.8] Federally Enforceable Through Title V Permit

46. The owner or operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, and quantity and heat input of fuel used. [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit

47. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 3, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit
PERMIT UNIT: S-1547-149-20
SECTION: 32   TOWNSHIP: 28S   RANGE: 21E
EXPIRATION DATE: 03/31/2007

EQUIPMENT DESCRIPTION:
21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #2 WITH GENERAL ELECTRIC MODEL LM2500
PE GAS TURBINE, UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR EQUIPPED WITH SCR AND AMMONIA
INJECTION, AND BYPASS STACK EQUIPPED WITH SCR AND AMMONIA INJECTION

PERMIT UNIT REQUIREMENTS

1. Fuel consumption shall not exceed 5,650 MMBtu/day of fuel gas. [District Rule 2201] Federally Enforceable Through Title V Permit

2. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

3. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates (three-hour rolling average) shall not exceed any of the following: 0.0111 lb-NOx/MMBtu or 3 ppmv-NOx @ 15% O2, and 0.076 lb-
CO/MMBtu or 200 ppmvd-CO @15% O2. [District Rules 2201 and 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

4. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates shall not exceed any of the following: 0.016 lb-PM10/MMBtu, 0.010 lb-SOx/MMBtu, 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Maximum daily emission limitations (DEL) shall not exceed any of the following: 190.2 lb-NOx/day, 56.5 lb-
SOx/day, 90.4 lb-PM10/day, 429.4 lb-CO/day, and 45.2 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

7. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.23] Federally Enforceable Through Title V Permit

8. On days of gas turbine engine startup/shutdown and/or reduced load, permittee shall demonstrate compliance with NOx daily emission limitation by records of calculations using CEMS data, fuel rate data, and daily hours of operation data. [District Rule 1080] Federally Enforceable Through Title V Permit

9. Permittee shall report the following emission exceedances to the District: NOx emission rate on a three-hour average, and DEL of NOx during days of gas turbine engine startup/shutdown or reduced load. [District Rule 1080] Federally Enforceable Through Title V Permit

10. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081] Federally Enforceable Through Title V Permit

11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Permittee shall maintain accurate daily records of fuel gas consumption and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1081] Federally Enforceable Through Title V Permit

13. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

14. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

15. Continuous emission monitoring systems shall be calibrated and operated according to EPA guidelines as specified in CFR, Part 60, Appendix B. [District Rule 4001 and 40 CFR 60.334(b)] Federally Enforceable Through Title V Permit

16. The owner or operator shall install, certify, maintain, operate and quality-assure a system which continuously measures and records the exhaust gas oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, 40 CFR 60.334(a), District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

17. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit

18. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

19. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

20. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b), District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

21. Permittee shall submit a CEMS written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEMS was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR 60.334(j), District Rule 1080, 8.0 and District Rule 2520, 9.3.2 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

22. Excess emissions shall be defined as any consecutive 2-hour period during which the average emissions of NOx and CO, as measured by continuous monitoring system exceeds the concentration emissions limits set forth for these pollutants. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

23. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEMS. The operator shall inform the District of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit
24. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 3.5 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 3.5 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(h) & District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. [40 CFR 60.335(b), District Rule 4703, 6.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335 and District Rules 1081, 4703, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

28. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

29. Performance testing shall be witnessed or authorized District by personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2 & 7.3] Federally Enforceable Through Title V Permit

30. Daily records of NOx and CO emission calculations during days of startup/shutdown or reduced load shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Source testing to measure ammonia shall be conducted using test method BAAQMD ST-1B. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of the daily calculated ammonia slip measurements. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

33. The operator shall monitor the ammonia injection rate that was established at the time of startup emission testing during CEMS breakdowns to demonstrate NOx emission compliance. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

34. Sulfur compound emissions shall not exceed 0.015% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); District Rule 4801] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of the following: 1) the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the permit unit; 2) performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS; and 3) emission measurements. [District Rules 1080, 7.3, 2520, 9.3.2 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

36. The owner or operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, and quantity and heat input of fuel used. [District Rules 2520, 9.3.2, 4703, 6.2.6] Federally Enforceable Through Title V Permit
37. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 9/20/07). [District Rule 4703, 6.1] Federally Enforceable Through Title V Permit

38. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 3, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

39. CO emissions shall not exceed (lbs/hr) (three-hour average) = 38-(0.2)*(ambient air temperature in °Fahrenheit) (not to exceed 30 lbs/hr) and (ppmv) = 1.86*(lbs/hr) @ 15% O2 (not to exceed 55.8 ppmv). [PSD SJ 85-03] Federally Enforceable Through Title V Permit

40. Permittee shall operate and maintain a continuous monitoring system to measure the ambient air temperature. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

41. Permittee shall operate and maintain a water injection system and instrumentation to continuously monitor and record levels of consumption of fuel and water. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

42. EPA Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable PSD emissions limits. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

43. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
These terms and conditions are part of the Facility-wide Permit to Operate.

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-151-20
EXPIRATION DATE: 05/31/2007

SECTION: 32  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #3 WITH GENERAL ELECTRIC MODEL LM2500
PE GAS TURBINE, UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR EQUIPPED WITH SCR AND AMMONIA
INJECTION, AND BYPASS STACK EQUIPPED WITH SCR AND AMMONIA INJECTION

PERMIT UNIT REQUIREMENTS

1. Fuel consumption shall not exceed 5,650 MMBtu/day of fuel gas. [District Rule 2201] Federally Enforceable Through
Title V Permit

2. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [District Rule
4703, 6.4.5] Federally Enforceable Through Title V Permit

3. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates (three-hour rolling
average) shall not exceed any of the following: 0.011 lb-NOx/MMBtu or 3 ppmv-NOx @ 15% O2, and 0.076 lb-
CO/MMBtu or 200 ppmvd-CO @15% O2. [District Rule 4703, 5.1.2, 5.2 and District Rule 2201] Federally
Enforceable Through Title V Permit

4. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates shall not exceed any of
the following: 0.016 lb-PM10/MMBtu, 0.010 lb-SOx/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201]
Federally Enforceable Through Title V Permit

5. Maximum daily emission limitations (DEL) shall not exceed any of the following: 190.2 lb-NOx/day, 56.5 lb-
SOx/day, 90.4 lb-PM10/day, 429.4 lb-CO/day, and 45.2 lb-VOC/day. [District Rule 2201] Federally Enforceable
Through Title V Permit

6. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of
two hours and two hours, respectively, per occurrence. [District Rule 4703, 3.25] Federally Enforceable Through Title
V Permit

7. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in
order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable
Through Title V Permit

8. On days of gas turbine engine startup/shutdown and/or reduced load, permittee shall demonstrate compliance with
NOx daily emission limitation by records of calculations using CEM data, fuel rate data, and daily hours of operation
data. [District Rule 1080] Federally Enforceable Through Title V Permit

9. Permittee shall report the following emission exceedances to the District: NOx emission rate on a three-hour average,
and DEL of NOx during days of gas turbine engine startup/shutdown. [District Rule 1080] Federally Enforceable
Through Title V Permit

10. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081]
Federally Enforceable Through Title V Permit

11. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Permittee shall maintain accurate daily records of fuel gas consumption and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1081] Federally Enforceable Through Title V Permit

13. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

14. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

15. Continuous emission monitoring systems shall be calibrated and operated according to EPA guidelines as specified in CFR, Part 60, Appendix B. [District Rule 4001 and 40 CFR 60.334(b)] Federally Enforceable Through Title V Permit

16. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

17. The permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

18. The owner or operator shall install, certify, maintain, operate and quality-assure a system which continuously measures and records the exhaust gas oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, 40 CFR 60.334(b), District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

19. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit

20. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

21. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

22. Records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

23. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b), District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

24. Permittee shall submit a CEMs written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR 60.334(i), (j)(5), District Rule 1080, 8.0 and District Rule 2520, 9.6.1 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
25. The CEMS shall be linked to a data logger which is compatible with the District’s Data acquisition system. Upon notice by the District that the facility’s CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Excess emissions shall be defined as any consecutive 2-hour period during which the average emissions of NOx and CO, as measured by continuous monitoring system exceeds the concentration emissions limits set forth for these pollutants. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

27. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

28. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 3.5 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 3.5 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. [40 CFR 60.335(b), District Rule 4703, 6.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081, 4703, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

31. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

32. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

33. Daily records of NOx and CO emission calculations during days of startup/shutdown or reduced load shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. CO emissions shall not exceed (lbs/hr) (three-hour average) = 38-(0.2)*(ambient air temperature in °Fahrenheit) (not to exceed 30 lbs/hr) and (ppmv) = 1.86*(lbs/hr) @ 15% O2 (not to exceed 55.8 ppmv). [PSD SJ 85-03] Federally Enforceable Through Title V Permit

35. Permittee shall operate and maintain a continuous monitoring system to measure the ambient air temperature. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

36. Permittee shall operate and maintain a water injection system and instrumentation to continuously monitor and record levels of consumption of fuel and water. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

37. EPA Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable PSD emissions limits. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

38. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
39. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Source testing to measure ammonia shall be conducted using test method BAAQMD ST-1B. [District Rules 4102 and 2201] Federally Enforceable Through Title V Permit

41. The permittee shall maintain records of the daily calculated ammonia slip measurements. [District Rules 4102 and 2201] Federally Enforceable Through Title V Permit

42. The operator shall monitor the ammonia injection rate that was established at the time of startup emission testing during CEM breakdowns to demonstrate NOX emission compliance. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of the following: 1) the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the permit unit; 2) performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS; 3) emission measurements and 4) all records or required monitoring data and support information. All records shall be maintained for a period of five years and available for District inspection upon request. [District Rules 1080, 7.3, 2520, 9.4.2 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

44. The owner or operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, and quantity and heat input of fuel used. [District Rules 2520, 9.4.2, 4703, 6.2.6] Federally Enforceable Through Title V Permit

45. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); District Rule 4801] Federally Enforceable Through Title V Permit

46. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 9/20/07). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

47. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 3, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Flare shall be equipped with a heat sensing device such as a thermocouple, ultraviolet beam sensor, infrared sensor, or an equivalent device capable of continuously detecting at least one pilot flame or the flare flame is present. The flame detection device shall be kept operational at all times except during flare maintenance when the flare is isolated from gas flow. During essential planned power outages when the flare is operating, the pilot monitor is allowed to be non-functional if the flare flame is clearly visible to onsite operators. Effective on and after July 1, 2012, all pilot monitor downtime shall be reported annually pursuant to Rule 4311, section 6.2.3.6. [District Rule 4311, 5.4] Federally Enforceable Through Title V Permit

2. A flame shall be present at all times when combustible gases are vented through the flare. [District Rule 4311, 5.2] Federally Enforceable Through Title V Permit

3. Flare outlet shall be equipped with an automatic ignition system, or, shall operate with a pilot flame present at all times when combustible gases are vented through the flare, except during purge periods for automatic-ignition equipped flares. [District Rule 4311, 5.3] Federally Enforceable Through Title V Permit

4. If the flare uses a flow-sensing automatic ignition system and does not use a continuous flame pilot, the flare shall use purge gas for purging. [District Rule 4311, 5.5] Federally Enforceable Through Title V Permit

5. Visible emissions from flare shall be less than 5% opacity, except for a period or periods aggregating three minutes or less in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Only natural gas shall be used as pilot fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Volume of gas combusted in flare shall not exceed 1.2 MMscf/day and 3.15 MMscf/calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Sulfur compound concentration (as H2S) of gas flared shall not exceed 961 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Efficiency of sulfur removal unit shall be maintained at not less than 95% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Permittee shall demonstrate compliance with sulfur compound concentration limit and sulfur removal efficiency at least once every 12.6 MMscf of gas treated, by sample analysis of inlet and outlet gas streams of sulfur removal unit. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall maintain a record of all sample analysis made of inlet and outlet gas streams, and upon request, shall make the most recent record available for District inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
12. Emissions shall not exceed PM10: 2.5 lb/MMscf, SOx: 240.65 lb/MMscf (as SO2), NOx: 140 lb/MMscf (as NO2), 
VOC: 2.8 lb/MMscf, CO: 35 lb/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall keep accurate records of dates and volumes of gas flared. Such records shall be retained for a period of 
at least five years and be made readily available for District inspection upon request. [District Rules 2201 and 4311, 
6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-588-5
EXPIRATION DATE: 08/31/2007
SECTION: SW16 TOWNSHIP: 32S RANGE: 23E
PERMIT UNIT REQUIREMENTS

1. Only natural gas shall be used as pilot fuel. [District Rule 2201] Federally Enforceable Through Title V Permit
2. No more than 137 MSCFD of noncondensible gases from Lockwood Dehydration Facility and the Republic Lease shall be combusted in flare. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Flare shall be operated only when steam generators S-1547-159 or S-1547-656 becomes inoperable and not more than seventy-two hours in a month. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Permittee shall keep accurate records of dates and volumes of gas flared. Such records shall be retained for a period of at least five years and be made available for District inspection upon request. [District Rules 2201and 4311, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-699-3
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
78 BHP PORTABLE EMERGENCY STANDBY DIESEL FIRED JOHN DEERE MODEL CD4239F ENGINE POWERING AIR COMPRESSOR (DEHY 27)

PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7 and 17 CCR 93115] Federally Enforceable Through Title V Permit

2. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 2201; 4801, 3.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit

3. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7] Federally Enforceable Through Title V Permit

4. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

5. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7] Federally Enforceable Through Title V Permit

6. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115] Federally Enforceable Through Title V Permit

8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. The equipment shall not be operated within 1000 feet of any K-12 school. [District Rule 4102]

10. Engine shall only operate within the Heavy Oil Western Stationary Source. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7 and 17 CCR 93115] Federally Enforceable Through Title V Permit

2. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 2201, 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

3. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7] Federally Enforceable Through Title V Permit

4. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

5. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7] Federally Enforceable Through Title V Permit

6. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115] Federally Enforceable Through Title V Permit

8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. The equipment shall not be operated within 1000 feet of any K-12 school. [District Rule 4102]

10. Engine shall only operate within the Heavy Oil Western Stationary Source. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-703-3
EXPIRATION DATE: 09/30/2007

EQUIPMENT DESCRIPTION:
PORTABLE EMERGENCY STANDBY 209 BHP GASOLINE FIRED WAUKESHA MODEL 145G2U ENGINE
POWERING ELECTRICAL GENERATOR (BELRIDGE MAIN OFFICE)

PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. The equipment shall not be operated within 1000 feet of any K-12 school. [District Rule 4102]

4. Engine shall only operate within the Heavy Oil Western Stationary Source. [District Rule 2201 and 4102] Federally Enforceable Through Title V Permit

5. Only gasoline shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance and testing purposes shall not exceed 100 hours per year, as determined by an operational nonresettable elapsed operating time meter. [District Rules 4701 and 4702, 4.2, 17 CCR 93115] Federally Enforceable Through Title V Permit

7. The permittee shall operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. The owner or operator shall maintain these required meters in proper operating condition. The fuel meter shall be calibrated periodically per the recommendations of the manufacturer. [District Rule 4702, 5.7 and 17 CCR 93115] Federally Enforceable Through Title V Permit

8. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppm, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, 3.1] Federally Enforceable Through Title V Permit

9. Unit shall be fired on gasoline with a sulfur content of less than 0.008% by weight. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Operator shall maintain copies of fuel invoices and supplier certifications of gasoline sulfur content. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. Records of operating hours shall be kept for units operating less than 200 hours per year. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. On all units which are not emergency or backup IC engines operating less than 200 hours per year, operator shall perform a source test for particulate emissions within six months of the initial Title V permit issuance. Source testing for particulate matter shall be performed according to EPA Method 5, stack gas velocity by EPA Method 2, and the stack gas moisture content by EPA Method 4. If the initial PM test result is less than or equal to 0.06 grain/dscf, then testing shall occur not less than once every 5 years. Otherwise, testing shall occur not less than once every 24 months. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERML-COUNTY, CA
13. Test results from an engine that represents a group of engines in terms of rated brake horsepower, engine make and series, operational conditions, fuel used, and control method, shall satisfy testing requirements provided this group of engines is owned and operated by a single owner/operator. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. The permittee shall maintain records of hours of emergency and non-emergency operation. Records shall include the date, the number of hours of operation, the purpose of the operation (e.g., load testing, weekly testing, rolling blackout, general area power outage, etc.), and the type and quantity (cubic feet of gas or gallons of liquid) of fuel used. All records of required monitoring and support information shall also be maintained. [District Rule 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

15. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

2. Note: Formerly S-1511-273
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation, gas turbine engine shall be equipped with continuously recording fuel-to-water injection ratio monitor accurate to within +/- 5% [District Rule 2201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall exhaust only to heat recovery steam generator and duct burner shall receive combustion air only from gas turbine exhaust. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Upon recommencing operation, duct burner fuel gas supply shall be equipped with injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Upon recommencing operation, ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, gas temperature at SCR catalyst section inlet shall be monitored by operational temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates at duct burner exhaust shall not exceed any of the following: 23.0 lb/day PM10, 4.7 lb/day SOx (as SO2), 64.8 lb/day NOx (as NO2), 26.4 lb/day VOC, or 168.7 lb/day CO. [District Rule 2201] Federally Enforceable Through Title V Permit

12. No more than 1.4 MM scf/day of natural gas shall be consumed by gas turbine and no more than 0.9 MM scf/day of natural gas shall be consumed by duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and 2 hours for shutdown, per occurrence. [District Rule 4001, District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

15. Upon recommencing operation, to demonstrate compliance with NO2 and CO emissions during days of startup/shutdown, daily emissions shall be calculated by a continuous emissions monitoring (CEM) system. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District Rule 2201] Federally Enforceable Through Title V Permit

17. Until January 1, 2011, except during periods of gas turbine engine startup/shutdown, emission rates (based on three-hour rolling average) shall not exceed any of the following: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 190.2 lb/day) or CO: 200 ppmvd @15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1.2 and 5.2] Federally Enforceable Through Title V Permit

18. On and after January 1, 2011, emissions from this unit shall not exceed any of the following (based on three-hour rolling average): NOx (as NO2): 5 ppmvd dry @ 15% O2 (equates to 27.2 lb/day) and CO: 200 ppmvd dry @ 15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1.3 and 5.2] Federally Enforceable Through Title V Permit

19. Except during periods of startup/shutdown, gas turbine engine emission rates shall not exceed any of the following: NOx as NO2: 2.70 lb/hr, or CO: 7.03 lb/hr, PM10: 0.96 lb/hr, SOx as SO2: 0.20 lb/hr, or VOC: 1.10 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 150 ppmvd @ 15% O2 and SOX emissions shall not exceed 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

21. Compliance with hourly NOx (2.70 lb/hr) and CO (7.03 lb/hr) emission limits shall be demonstrated annually by District-witnessed sample collection done by independent testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

22. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

23. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

24. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring. [District Rule 4001] Federally Enforceable Through Title V Permit

29. Upon recommencing operation, permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rule 1070]

30. Upon recommencing operation, permittee shall maintain accurate records of ammonia consumption. [District Rule 1070]
31. Permittee shall report the following emission exceedances to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit

32. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not be recognized as a basis for a Rule 1100 enforcement exemption. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 4703, 6.2.4] Federally Enforceable Through Title V Permit

34. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

35. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

36. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the auxiliary burner in operation and not in operation. An annual demonstration of compliance with the auxiliary burner in operation is not required in any year in which the auxiliary burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the auxiliary burner. An annual demonstration of compliance with the auxiliary burner not in operation is not required in any year in which the auxiliary burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the auxiliary burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

37. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

38. Upon recommencing operation, the permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

39. Upon recommencing operation, the continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit

40. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

41. Upon recommencing operation, records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
42. When designated as a dormant emissions unit, the permittee shall not be required to perform monitoring requirements or submit CEMs reports for any calendar quarter in which the unit is not operational. Permittee shall submit a CEMs written report to the District for each calendar quarter in which the unit operated, due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rules 1080, 8.0, 2201, 2520, 9.6.1] Federally Enforceable Through Title V Permit

43. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

44. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. For planned CEM maintenance that will require the CEM system to be shut down more than 4 hours in a day or more than 12 hours in a calendar month, the operator shall notify the District at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

45. Upon recommencing operation, permittee shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 0.75 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 0.75 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

47. The following methods shall be used for testing required by this permit: NOx (ppmv) - EPA Method 7E., NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B, Stack gas oxygen - EPA Method 3 or 3A, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H2S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 and 4703] Federally Enforceable Through Title V Permit

48. Note: Formerly S-1511-361
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation, gas turbine engine shall be equipped with continuously recording fuel-to-water injection ratio monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall exhaust only to heat recovery steam generator and duct burner shall receive combustion air only from gas turbine exhaust. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Upon recommencing operation, duct burner fuel gas supply shall be equipped with injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Upon recommencing operation, ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, gas temperature at SCR catalyst section inlet shall be monitored by operational temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates at duct burner exhaust shall not exceed any of the following: 23.0 lb/day PM10, 4.7 lb/day SOx (as SO2), 64.8 lb/day NOx (as NO2), 26.4 lb/day VOC, or 168.7 lb/day CO. [District Rule 2201] Federally Enforceable Through Title V Permit

12. No more than 1.4 MM scf/day of natural gas shall be consumed by gas turbine and no more than 0.9 MM scf/day of natural gas shall be consumed by duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and 2 hours for shutdown, per occurrence. [District Rule 4001, District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rule 1070] Federally Enforceable Through Title V Permit

15. Upon recommencing operation, to demonstrate compliance with NO2 and CO emissions during days of startup/shutdown, daily emissions shall be calculated by a continuous emissions monitoring (CEM) system. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District Rule 2201] Federally Enforceable Through Title V Permit

17. Until January 1, 2011, except during periods of gas turbine engine startup/shutdown, emission rates (based on three-hour rolling average) shall not exceed any of the following: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 190.2 lb/day) or CO: 200 ppmvd @15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

18. On and after January 1, 2011, emissions from this unit shall not exceed any of the following (based on three-hour rolling average): NOx (as NO2): 5 ppmv dry @ 15% O2 (equates to 27.2 lb/day) and CO: 200 ppmv dry @ 15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

19. Except during periods of startup/shutdown, gas turbine engine emission rates shall not exceed any of the following: NOx as NO2: 2.70 lb/hr, CO: 7.03 lb/hr, PM10: 0.96 lb/hr, SOx as SO2: 0.20 lb/hr, or VOC: 1.10 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 150 ppmvd @ 15% O2 and SOX emissions shall not exceed 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

21. Compliance with hourly NOx (2.70 lb/hr) and CO (7.03 lb/hr) emission limits shall be demonstrated annually by District-witnessed sample collection done by independent testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

22. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

23. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

25. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Records required by this permit shall be retained on site for a period of at least two years and shall be made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

29. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring. [District Rule 4001] Federally Enforceable Through Title V Permit
30. Upon recommencing operation, permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of ammonia consumption. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

32. Permittee shall report the following emission exceedances to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not recognized as a basis for a Rule 1100 enforcement exemption. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

35. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

36. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the auxiliary burner in operation and not in operation. An annual demonstration of compliance with the auxiliary burner in operation is not required in any year in which the auxiliary burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the auxiliary burner. An annual demonstration of compliance with the auxiliary burner not in operation is not required in any year in which the auxiliary burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the auxiliary burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

37. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

38. Upon recommencing operation, the permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

39. Upon recommencing operation, the continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit

40. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

41. Upon recommencing operation, records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
42. When designated as a dormant emissions unit, the permittee shall not be required to perform monitoring requirements or submit CEMs reports for any calendar quarter in which the unit is not operational. Permittee shall submit a CEMs written report to the District for each calendar quarter in which the unit operated due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and District Rule 2520, 9.6.1] Federally Enforceable Through Title V Permit

43. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

44. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. For planned CEM maintenance that will require the CEM system to be shut down more than 4 hours in a day or more than 12 hours in a calendar month, the operator shall notify the District at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

45. Upon recommencing operation, permittee shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 0.75 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 0.75 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

47. The following methods shall be used for testing required by this permit: NOx (ppmv) - EPA Method 7E, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B, Stack gas oxygen - EPA Method 3 or 3A, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H2S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 and 4703, 6.4] Federally Enforceable Through Title V Permit

48. Note: Formerly S-1511-362
PERMIT UNIT REQUIREMENTS

1. Operation of the unit is not authorized until modifications are made to comply with District Rules as authorized by an Authority to Construct. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel line shall be physically disconnected from the unit. (Adjust as necessary) [District Rule 2080] Federally Enforceable Through Title V Permit

3. While dormant, normal source testing shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Upon recommencing operation, gas turbine engine shall be equipped with continuously recording fuel-to-water injection ratio monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall exhaust only to heat recovery steam generator and duct burner shall receive combustion air only from gas turbine exhaust. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Upon recommencing operation, duct burner fuel gas supply shall be equipped with injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Upon recommencing operation, ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, gas temperature at SCR catalyst section inlet shall be monitored by operational temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Emission rates at duct burner exhaust shall not exceed any of the following: 23.0 lb/day PM10, 4.7 lb/day SOx (as SO2), 64.8 lb/day NOx (as NO2), 26.4 lb/day VOC, or 168.7 lb/day CO. [District Rule 2201] Federally Enforceable Through Title V Permit

12. No more than 1.4 MM scf/day of natural gas shall be consumed by gas turbine and no more than 0.9 MM scf/day of natural gas shall be consumed by duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and 2 hours for shutdown, per occurrence. [District Rule 4001, District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas 
consumption for normal operation and for the startup/shutdown periods. [District Rule 1070] Federally Enforceable 
Through Title V Permit

15. Upon recommencing operation, to demonstrate compliance with NO2 and CO emissions during days of 
startup/shutdown, daily emissions shall be calculated by a continuous emissions monitoring (CEM) system. [District 
Rule 2201] Federally Enforceable Through Title V Permit

16. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such 
records shall be made readily available for District inspection upon request for a period of five years. [District 
Rule 1070, District Rule 2201] Federally Enforceable Through Title V Permit

17. Until January 1, 2011, except during periods of gas turbine engine startup/shutdown, emission rates (based on three-
hour rolling average) shall not exceed any of the following: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 190.2 
lb/day) or CO: 200 ppmvd @15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1 and 5.2] Federally 
Enforceable Through Title V Permit

18. On and after January 1, 2011, emissions from this unit shall not exceed any of the following (based on three-hour 
rolling average): NOx (as NO2): 5 ppmv dry @ 15% O2 (equates to 27.2 lb/day) and CO: 200 ppmv dry @15% O2 
equates to 661.8 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

19. Except during periods of startup/shutdown, gas turbine engine emission rates shall not exceed any of the following: 
NOx as NO2: 2.70 lb/hr, CO: 7.03 lb/hr, PM10: 0.96 lb/hr, SOx as SO2: 0.20 lb/hr, or VOC: 1.10 lb/hr. [District Rule 
2201] Federally Enforceable Through Title V Permit

20. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 150 ppmvd @ 15% O2 and 
SOX emissions shall not exceed 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V 
Permit

21. Compliance with hourly NOx (2.70 lb/hr) and CO (7.03 lb/hr) emission limits shall be demonstrated annually by 
District-witnessed sample collection done by independent testing laboratory. [District Rule 1081] Federally 
Enforceable Through Title V Permit

22. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing 
laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

23. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 
1081] Federally Enforceable Through Title V Permit

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be 
notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at 
least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

25. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source 
Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] 
Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for 
each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title 
V Permit

28. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily 
available for District inspection upon request. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title 
V Permit

29. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including 
notification, recordkeeping and monitoring. [District Rule 4001] Federally Enforceable Through Title V Permit
30. Upon recommencing operation, permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH₃ injection systems, and their associated controller and instrumentation units. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of ammonia consumption. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

32. Permittee shall report the following emission exceedances to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit

33. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not be recognized as a basis for a Rule 1100 enforcement exemption. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

35. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

36. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the auxiliary burner in operation and not in operation. An annual demonstration of compliance with the auxiliary burner in operation is not required in any year in which the auxiliary burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the auxiliary burner. An annual demonstration of compliance with the auxiliary burner not in operation is not required in any year in which the auxiliary burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the auxiliary burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

37. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

38. Upon recommencing operation, the permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

39. Upon recommencing operation, the continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit

40. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

41. Upon recommencing operation, records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3] Federally Enforceable Through Title V Permit
42. When designated as a dormant emissions unit, the permittee shall not be required to perform monitoring requirements or submit CEMs reports for any calendar quarter in which the unit is not operational. Permittee shall submit a CEMs written report to the District for each calendar quarter in which the unit operated due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and District Rule 2520, 9.6.1] Federally Enforceable Through Title V Permit

43. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

44. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. For planned CEM maintenance that will require the CEM system to be shut down more than 4 hours in a day or more than 12 hours in a calendar month, the operator shall notify the District at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

45. Upon recommencing operation, permittee shall install and maintain equipment, facilities, and systems compatible with the District’s CEM data polling software and shall make CEM data available to the District’s automated polling system on a daily basis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

46. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 0.75 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 0.75 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

47. The following methods shall be used for testing required by this permit: NOx (ppmv) - EPA Method 7E, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B, Stack gas oxygen - EPA Method 3 or 3A, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H2S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 and 4703, 6.4] Federally Enforceable Through Title V Permit

48. Note: Formerly S-1511-362
PERMIT UNIT REQUIREMENTS

1. The engine shall be operated with the timing retarded four degrees from the manufacturer's standard recommended timing. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Engine shall be equipped with turbocharger and air to air aftercooler. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Engine shall be equipped with positive crankcase ventilation (PCV) system or 90% efficient control device for visible crankcase emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. This engine shall be operated only for required regulatory purposes and for start-up of cogeneration units S-1547-879, '880, '881, '148, '149, and '151 during utility power interruptions. [District Rule 2201] Federally Enforceable Through Title V Permit

5. If engine exhibits visible emissions greater than 1/2 Ringelmann aggregating more than three minutes in any one hour, District witnessed compliance testing of particulate matter emissions shall be conducted by independent testing laboratory. [District Rule 2201& District Rule 1081, 4.0] Federally Enforceable Through Title V Permit

6. Official test results and field data of each compliance test shall be submitted to the District within 60 days after collection. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit

7. This permit unit is approved to operate at only the following locations: SW/4 Sec. 2, T29S, R21E and SE/4 Sec. 32, T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201] Federally Enforceable Through Title V Permit

9. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

11. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

12. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit
13. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

14. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

15. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

16. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Each storage tank subject to this permit shall be equipped with an ARB certified Phase I vapor recovery system, which shall prevent at least 95% by weight of all gasoline vapors displaced during the filling of storage tanks from entering the atmosphere. The transfer of gasoline from any delivery vessel to any stationary storage container with 250 gallon capacity or more shall not be allowed unless the container is equipped with an ARB certified Phase I system and maintained and operated according to manufacturers specifications. [District Rule 4621, 3.4 and 5.2] Federally Enforceable Through Title V Permit

2. Each dispensing system shall be equipped with an ARB certified Phase II vapor recovery system which shall prevent at least 95% by weight of all gasoline vapors displaced during refueling of vehicles from entering the atmosphere. [District Rule 4622, 5.1] Federally Enforceable Through Title V Permit

3. Each gasoline storage tank shall be equipped with a permanent submerged fill pipe. [District Rule 4621, 5.1.1] Federally Enforceable Through Title V Permit

4. Each aboveground storage tank shall be equipped with a pressure-vacuum valve set to within 10% of the maximum allowable working pressure of the tank. No gasoline shall be placed, stored, or held in any above-ground tank of 250 gallon capacity or more unless it is so equipped. [District Rule 4621, 5.1.2; 4623, 5.4] Federally Enforceable Through Title V Permit

5. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo tank which attest to the vapor integrity of the tank. [District Rule 4621, 5.7] Federally Enforceable Through Title V Permit

6. No person shall top off a motor vehicle fuel tank. [District Rule 4622, 5.6] Federally Enforceable Through Title V Permit

7. No owner or operator shall tamper with, or permit tampering with, the ARB certified vapor recovery system in a manner that would impair the operation or effectiveness of the system. [District Rule 4622, 5.9] Federally Enforceable Through Title V Permit

8. No gasoline shall be transferred into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations or in Section 5.4 of SJVUAPCD Rule 4622 (as amended February 17, 1994) until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit
9. Any defects identified shall be tagged "Out of Order"; the tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defect has been repaired, replaced or adjusted. In the case of defects identified by the District, tagged equipment shall be rendered inoperable and the tag shall not be removed until the District has been notified of the repairs, and/or the District has inspected and authorized the tagged equipment for use. A log containing at least the following shall be maintained: date and type of defect identified and date repaired, replaced or corrected. [District Rules 2520, 9.4.2 and 4622, 5.4] Federally Enforceable Through Title V Permit

10. Each ARB certified vapor recovery system shall be tested within 60 days of major modification or installation, except as otherwise allowed by this permit. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. [District Rule 4621, 6.2] Federally Enforceable Through Title V Permit

11. The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B at least once every 12 months. [District Rule 4622] Federally Enforceable Through Title V Permit

12. A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

13. A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

14. Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

15. The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621, 6.2 and 4622, 6.4] Federally Enforceable Through Title V Permit

16. The District shall be notified within 24 hours of the facility's pass/fail status after the performance of each test. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The vapor recovery systems and their components shall be operated and maintained in accordance with the State certification requirements. [District Rules 4621, 5.2 and 4622, 5.1] Federally Enforceable Through Title V Permit

18. The operator shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with Section 5.4.2 of Rule 4622. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) All applicable ARB Executive Orders, Approval Letters, and District Permits; 2) The manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 3) System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements; 4) Protocol for performing periodic maintenance inspections including the components to be inspected and the defects requiring repair; and 5) Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622, 5.3 and 6.3] Federally Enforceable Through Title V Permit

19. The operator shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility in a calendar month as follows: A) less than 25,000 gallons - one day per week; B) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O&M manual. [District Rule 4622, 5.3 and 6.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. The operator shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

21. The ARB certified vapor recovery system and all of its components shall be maintained in good repair. Any ARB certified gasoline vapor recovery system, which has been installed and has been issued a permit to operate, shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the facility. [District Rule 4622, 5.2] Federally Enforceable Through Title V Permit

22. Vapor recovery systems and gasoline dispensing equipment shall be maintained leak-free as verified using EPA Test Method 21 and visual inspection. Leak testing shall be performed at least annually and within 60 days of all major modifications. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. A leak is defined as the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs or a reading as methane in excess of 10,000 ppm as determined using EPA Method 21. [District Rules 2520, 9.4.2 and 4622, 3.6 & 5.1] Federally Enforceable Through Title V Permit

23. Each operator shall maintain a leak inspection log containing, at a minimum, the following: inspector's name, location and description of component type where any leak is found; date of leak detection, emission level (ppm) if applicable, and date leak is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain monthly gasoline throughput records. [District Rule 4622, 6.3] Federally Enforceable Through Title V Permit

25. Operator shall maintain all records of required monitoring data and support information for inspection for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. All records required by this permit shall be retained on-site for a period of at least five years, and shall be made available for inspection upon request. [District Rule 4622, 6.3] Federally Enforceable Through Title V Permit

27. The requirements of 40 CFR 60 Subparts XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. Note: Formerly S-1511-452.
PERMIT UNIT REQUIREMENTS

1. Each storage tank subject to this permit shall be equipped with an ARB certified Phase I vapor recovery system, which shall prevent at least 95% by weight of all gasoline vapors displaced during the filling of storage tanks from entering the atmosphere. The transfer of gasoline from any delivery vessel to any stationary storage container with 250 gallon capacity or more shall not be allowed unless the container is equipped with an ARB certified Phase I system and maintained and operated according to manufacturers specifications. [District Rule 4621, 3.4 and 5.2] Federally Enforceable Through Title V Permit

2. Each dispensing system shall be equipped with an ARB certified Phase II vapor recovery system which shall prevent at least 95% by weight of all gasoline vapors displaced during refueling of vehicles from entering the atmosphere. [District Rule 4622, 5.1] Federally Enforceable Through Title V Permit

3. Each gasoline storage tank shall be equipped with a permanent submerged fill pipe. [District Rule 4621, 5.1.1] Federally Enforceable Through Title V Permit

4. Each aboveground storage tank shall be equipped with a pressure-vacuum valve set to within 10% of the maximum allowable working pressure of the tank. No gasoline shall be placed, stored, or held in any above-ground tank of 250 gallon capacity or more unless it is so equipped. [District Rule 4621, 5.1.2; 4623, 5.4] Federally Enforceable Through Title V Permit

5. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo tank which attest to the vapor integrity of the tank. [District Rule 4621, 5.7] Federally Enforceable Through Title V Permit

6. No person shall top off a motor vehicle fuel tank. [District Rule 4622, 5.6] Federally Enforceable Through Title V Permit

7. No owner or operator shall tamper with, or permit tampering with, the ARB certified vapor recovery system in a manner that would impair the operation or effectiveness of the system. [District Rule 4622, 5.9] Federally Enforceable Through Title V Permit

8. No gasoline shall be transferred into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations or in Section 5.4 of SJVUAPCD Rule 4622 (as amended February 17, 1994) until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Any defects identified shall be tagged "Out of Order"; the tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defect has been repaired, replaced or adjusted. In the case of defects identified by the District, tagged equipment shall be rendered inoperable and the tag shall not be removed until the District has been notified of the repairs, and/or the District has inspected and authorized the tagged equipment for use. A log containing at least the following shall be maintained: date and type of defect identified and date repaired, replaced or corrected. [District Rules 2520, 9.4.2 and 4622, 5.4] Federally Enforceable Through Title V Permit

10. Each ARB certified vapor recovery system shall be tested within 60 days of major modification or installation, except as otherwise allowed by this permit. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. [District Rule 4621, 6.2] Federally Enforceable Through Title V Permit

11. The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B at least once every 12 months. [District Rule 4622] Federally Enforceable Through Title V Permit

12. A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

13. A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

14. Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

15. The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621, 6.2 and 4622, 6.4] Federally Enforceable Through Title V Permit

16. The District shall be notified within 24 hours of the facility's pass/fail status after the performance of each test. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The vapor recovery systems and their components shall be operated and maintained in accordance with the State certification requirements. [District Rules 4621, 5.2 and 4622, 5.1] Federally Enforceable Through Title V Permit

18. The operator shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with Section 5.4.2 of Rule 4622. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) All applicable ARB Executive Orders, Approval Letters, and District Permits; 2) The manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 3) System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements; 4) Protocol for performing periodic maintenance inspections including the components to be inspected and the defects requiring repair; and 5) Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622, 5.3 and 6.3] Federally Enforceable Through Title V Permit

19. The operator shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility in a calendar month as follows: A) less than 25,000 gallons - one day per week; B) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O&M manual. [District Rule 4622, 5.3 and 6.3] Federally Enforceable Through Title V Permit
20. The operator shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

21. The ARB certified vapor recovery system and all of its components shall be maintained in good repair. Any ARB certified gasoline vapor recovery system, which has been installed and has been issued a permit to operate, shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the facility. [District Rule 4622, 5.2] Federally Enforceable Through Title V Permit

22. Vapor recovery systems and gasoline dispensing equipment shall be maintained leak-free as verified using EPA Test Method 21 and visual inspection. Leak testing shall be performed at least annually and within 60 days of all major modifications. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. A leak is defined as the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs or a reading as methane in excess of 10,000 ppm as determined using EPA Method 21. [District Rules 2520, 9.4.2 and 4622, 3.6 & 5.1] Federally Enforceable Through Title V Permit

23. Each operator shall maintain a leak inspection log containing, at a minimum, the following: inspector’s name, location and description of component type where any leak is found; date of leak detection, emission level (ppm) if applicable, and date leak is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain monthly gasoline throughput records. [District Rule 4622, 6.3] Federally Enforceable Through Title V Permit

25. Operator shall maintain all records of required monitoring data and support information for inspection for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. All records required by this permit shall be retained on-site for a period of at least five years, and shall be made available for inspection upon request. [District Rule 4622, 6.3] Federally Enforceable Through Title V Permit

27. The requirements of 40 CFR 60 Subparts XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Each storage tank subject to this permit shall be equipped with an ARB certified Phase I vapor recovery system, which shall prevent at least 95% by weight of all gasoline vapors displaced during the filling of storage tanks from entering the atmosphere. The transfer of gasoline from any delivery vessel to any stationary storage container with 250 gallon capacity or more shall not be allowed unless the container is equipped with an ARB certified Phase I system and maintained and operated according to manufacturers specifications. [District Rule 4621, 3.4 and 5.2] Federally Enforceable Through Title V Permit

2. Each dispensing system shall be equipped with an ARB certified Phase II vapor recovery system which shall prevent at least 95% by weight of all gasoline vapors displaced during refueling of vehicles from entering the atmosphere. [District Rule 4622, 5.1] Federally Enforceable Through Title V Permit

3. Each gasoline storage tank shall be equipped with a permanent submerged fill pipe. [District Rule 4621, 5.1.1] Federally Enforceable Through Title V Permit

4. Each aboveground storage tank shall be equipped with a pressure-vacuum valve set to within 10% of the maximum allowable working pressure of the tank. No gasoline shall be placed, stored, or held in any above-ground tank of 250 gallon capacity or more unless it is so equipped. [District Rule 4621, 5.1.2; 4623, 5.4] Federally Enforceable Through Title V Permit

5. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo tank which attest to the vapor integrity of the tank. [District Rule 4621, 5.7] Federally Enforceable Through Title V Permit

6. No person shall top off a motor vehicle fuel tank. [District Rule 4622, 5.6] Federally Enforceable Through Title V Permit

7. No owner or operator shall tamper with, or permit tampering with, the ARB certified vapor recovery system in a manner that would impair the operation or effectiveness of the system. [District Rule 4622, 5.9] Federally Enforceable Through Title V Permit

8. No gasoline shall be transferred into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations or in Section 5.4 of SJVUAPCD Rule 4622 (as amended February 17, 1994) until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
9. Any defects identified shall be tagged "Out of Order"; the tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defect has been repaired, replaced or adjusted. In the case of defects identified by the District, tagged equipment shall be rendered inoperable and the tag shall not be removed until the District has been notified of the repairs, and/or the District has inspected and authorized the tagged equipment for use. A log containing at least the following shall be maintained: date and type of defect identified and date repaired, replaced or corrected. [District Rules 2520, 9.4.2 and 4622, 5.4] Federally Enforceable Through Title V Permit

10. The facility gasoline throughput shall not exceed 4,000 gallons per day and 300,000 gallons per year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Each ARB certified vapor recovery system shall be tested within 60 days of major modification or installation, except as otherwise allowed by this permit. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. [District Rule 4621, 6.2] Federally Enforceable Through Title V Permit

12. The permittee shall perform the "Minimum Maintenance Requirements" for the Hirt VCS-200 from CARB Executive Order G-70-139, and shall record all maintenance activities in a maintenance log. [District Rule 4622] Federally Enforceable Through Title V Permit

13. A person conducting testing of, or repairs to, a certified vapor recovery system shall be in compliance with District Rule 1177 (Gasoline Dispensing Facility Tester Certification). [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

14. A person performing installation of, or maintenance on, a certified Phase I or Phase II vapor recovery system shall be certified by the ICC for Vapor Recovery System Installation and Repair, or work under the direct and personal supervision of an individual physically present at the work site who is certified. The ICC certification shall be renewed every 24 months. [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

15. Proof of the ICC certification and all other certifications required by the Executive Order and installation and operation manual shall be made available onsite. [District Rules 4621, 6.3 and 4622, 6.4] Federally Enforceable Through Title V Permit

16. The permittee shall notify the District at least 7 days prior to each performance test. The test results shall be submitted to the District no later than 30 days after the completion of each test. [District Rule 4621, 6.2 and 4622, 6.4] Federally Enforceable Through Title V Permit

17. The District shall be notified within 24 hours of the facility's pass/fail status after the performance of each test. [District Rule 1081] Federally Enforceable Through Title V Permit

18. The vapor recovery systems and their components shall be operated and maintained in accordance with the State certification requirements. [District Rules 4621, 5.2 and 4622, 5.1] Federally Enforceable Through Title V Permit

19. The operator shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with Section 5.4.2 of Rule 4622. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) All applicable ARB Executive Orders, Approval Letters, and District Permits; 2) The manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 3) System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements; 4) Protocol for performing periodic maintenance inspections including the components to be inspected and the defects requiring repair; and 5) Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622, 5.3 and 6.3] Federally Enforceable Through Title V Permit

20. The operator shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility in a calendar month as follows: A) less than 25,000 gallons - one day per week; B) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O&M manual. [District Rule 4622, 5.3 and 6.3] Federally Enforceable Through Title V Permit
21. The operator shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was replaced, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

22. The ARB certified vapor recovery system and all of its components shall be maintained in good repair. Any ARB certified gasoline vapor recovery system, which has been installed and has been issued a permit to operate, shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the facility. [District Rule 4622, 5.2] Federally Enforceable Through Title V Permit

23. Vapor recovery systems and gasoline dispensing equipment shall be maintained leak-free as verified using EPA Test Method 21 and visual inspection. Leak testing shall be performed at least annually and within 60 days of all major modifications. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. A leak is defined as the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs or a reading as methane in excess of 10,000 ppm as determined using EPA Method 21. [District Rules 2520, 9.4.2 and 4622, 3.6 & 5.1] Federally Enforceable Through Title V Permit

24. Each operator shall maintain a leak inspection log containing, at a minimum, the following: inspector's name, location and description of component type where any leak is found; date of leak detection, emission level (ppm) if applicable, and date leak is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. The operator shall maintain monthly gasoline throughput records. [District Rule 4622, 6.3] Federally Enforceable Through Title V Permit

26. Operator shall maintain all records of required monitoring data and support information for inspection for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. All records required by this permit shall be retained on-site for a period of at least five years, and shall be made available for inspection upon request. [District Rule 4622, 6.3] Federally Enforceable Through Title V Permit

28. The requirements of 40 CFR 60 Subparts XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-675
PERMIT UNIT REQUIREMENTS

1. NOx emissions shall not exceed 6.14 g/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device capable of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

8. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115]

10. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1060-6
SECTION: 13  TOWNSHIP: 26S  RANGE: 20E
EXPIRATION DATE: 08/31/2007
EQUIPMENT DESCRIPTION:
3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION LOST HILLS UNIT #4

PERMIT UNIT REQUIREMENTS

1. Cogeneration unit shall include Allison Model 501-KB-5 48.7 MMBTU/hr gas-fired engine, synchronous electrical generator, unfired 22.5 MMBTU/hr steam generator, and inlet air evaporative cooler. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Turbine lube oil tank and generator gearbox lube oil tank shall vent only through fiber bed filter system or other District-approved control Device. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
4. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit
5. Gas turbine engine shall be equipped with water injection system for NOx control. [District Rule 2201] Federally Enforceable Through Title V Permit
6. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Gas turbine engine shall be equipped with continuously recording water to fuel injection rate monitoring system accurate to within +/- 5%. [District Rule 2201 & 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit
8. If ammonia injection system is inoperative for more than 1 hour, gas turbine shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Evaporative cooler shall use only fresh and filtered water. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Compliance testing of lube oil vent and gearbox vent shall be required if visible emissions from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District Rule 1081] Federally Enforceable Through Title V Permit
13. The ammonia (NH3) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 20 ppmvd. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Permittee shall maintain accurate records of ammonia consumption. [District Rule 1070 and 4703, 6.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
15. Gas temperature at SCR catalyst section inlet shall be continuously monitored by operational temperature indicator. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer and determined by performance tests. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

16. Permittee shall install, operate and maintain in calibration a system which continuously measures and records ammonia injection flow rate and pressure. Ammonia injection flow rate and pressure shall be operated within the range recommended by SCR manufacturer and determined by performance tests such that the turbine maintains 95% or greater control efficiency or complies with the applicable NOx emission concentration limit. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

17. Except during startup, shutdown, and reduced load periods, any one-hour period during which the average ammonia injection flowrate, as measured by the continuous monitoring system, falls outside the flowrate range as determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average ammonia injection flowrate, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

18. Fuel gas sulfur content shall not exceed 19.5 ppmv as hydrogen sulfide (H2S) or 1.1 gr/100 scf as total fuel sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 1.1 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 1.1 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. Except during periods of startup, shutdown, and shakedown, emissions rates (three hour rolling average) shall not exceed any of the following: NOx (as NO2): 5 ppmv dry @ 15% O2, CO: 41 ppmv dry @ 15% O2. [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

21. Startup and shutdown of the gas turbine, as defined in this permit and in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and two hours for shutdown, per occurrence. Emission concentrations subsequent to this startup period shall not exceed the limits specified in this permit except during shutdown. [40 CFR Subpart A 60.2 and District Rule 4703, 5.3] Federally Enforceable Through Title V Permit

22. The duration of reduced load shall not exceed a time period of one hour per occurrence. [District Rule 4703, 5.3] Federally Enforceable Through Title V Permit

23. Emissions shall not exceed any of the following limits: NOx (as NO2): 150.7 lb/day, CO: 107.5 lb/day, PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day or VOC: 39.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Daily records of NOx and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Maximum NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [40 CFR 60.332(a)(2) & 60.333(a)] Federally Enforceable Through Title V Permit

26. A source test to demonstrate compliance with NOx, CO, and NH3 emission limits, and fuel sulfur content shall be performed within 90 days of startup of this modified unit. The appropriate ammonia injection rate, fuel consumption, ammonia to fuel ratio, water to fuel ratio, and any other associated operating parameter shall be continuously monitored and recorded during this test to establish acceptable operating ranges. Selective Catalytic Reduction (SCR) 95% control efficiency may be demonstrated as an alternative to compliance with the Rule 4703 NOx emissions concentration limit. [District Rules 2201, 40 CFR 60.335(b), and 4703, 6.3] Federally Enforceable Through Title V Permit
27. Source testing to measure exhaust gas NOx, CO, and NH3 concentrations and, if applicable, Selective Catalytic Reduction (SCR) control efficiency shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). Performance testing shall be conducted under conditions representative of normal operation. [40 CFR 60.335(b), District Rules 2520, 9.4.2 and 4703, 6.3] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or 20, CO (ppmv) - EPA Method 10 or 10B, stack gas oxygen - EPA Method 3 or 3A or 20, fuel gas sulfur content - ASTM D1072, D4468, or D3246 or double GC for H2S and mercaptans, fuel gas HHV and LHV - ASTM D3598-91, D1826-88 or D1945-81, Ammonia slip - BAAQMD method ST-1B. [40 CFR 60.335(b) and District Rules 1081 & 4703, 6.4] Federally Enforceable Through Title V Permit

29. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

30. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

31. The permittee shall monitor and record the stack concentration of NOx, CO, NH3, and O2 at least once every month in which a source test is not performed. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH3 monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the previous calendar month. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit

32. If the NOx or CO concentrations corrected to 15% O2 as measured by the portable analyzer or the NH3 concentration, as measured by Draeger tubes or a District approved equivalent method, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit

33. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not be recognized as a basis for a Rule 1100 enforcement exemption. [District Rule 1070 and 4703, 6.2] Federally Enforceable Through Title V Permit

34. All NOx, CO, O2 and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NOx, CO and O2 analyzer as well as the NH3 emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit

35. Ammonia emission readings shall be conducted at the time the NOx, CO and O2 readings are taken. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit

36. The permittee shall maintain records of: (1) the date and time of NOx, CO, NH3 and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx, CO and NH3 concentrations corrected to 3% O2, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH3 emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703, 6.2] Federally Enforceable Through Title V Permit
37. Permittee shall report the following emission exceedance to the District: emission rates of NOx & CO on a three-hour rolling average and NSPS emission rate on one hour average. [District Rule 1070, 2201 and 4703, 6.2] Federally Enforceable Through Title V Permit

38. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. This information may be recorded electronically. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520, 9.4.2 & 4703, 6.2] Federally Enforceable Through Title V Permit

39. Permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rules 1070 and 4703, 6.2] Federally Enforceable Through Title V Permit

40. Permittee shall comply in full with Rule 4001 (New Source Performance Standards, 40 CFR 60 Subpart GG) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

41. The owner or operator shall maintain all records for a period of five years from the date of entry and shall make such records available to the APCO upon request. [District Rules 1080, 2201, & 4703, 6.2.4] Federally Enforceable Through Title V Permit

42. Note: Formerly S-1129-50.
PERMIT UNIT REQUIREMENTS

1. Cogeneration unit shall include Allison Model 501-KB-5 48.7 MMBTU/hr gas-fired engine, synchronous electrical generator, unfired 22.5 MMBTU/hr steam generator, and inlet air evaporative cooler. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Turbine lube oil tank and generator gearbox lube oil tank shall vent only through fiber bed filter system or other District-approved control Device. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

4. Gas turbine engine shall be equipped with water injection system for NOx control. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Gas turbine engine water injection rate shall be no less than 0.8/1.0 water to fuel ratio by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Gas turbine engine shall be equipped with continuously recording water to fuel injection rate monitoring system accurate to within +/- 5%. [District Rule 2201 & 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

7. If water injection system is inoperative, gas turbine shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Evaporative cooler shall use only fresh and filtered water. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Compliance testing of lube oil vent and gearbox vent shall be required if visible emissions from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District Rule 1081] Federally Enforceable Through Title V Permit

12. Fuel gas sulfur content shall not exceed 19.5 ppmv as hydrogen sulfide (H2S) or 1.1 gr/100 scf as total fuel sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during periods of startup and shutdown, emissions rates shall not exceed any of the following: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr or VOC: 1.65 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Except during periods of startup and shutdown, emissions rates (three hour rolling average) shall not exceed any of the following limits: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 150.6 lb/day) or CO: 200 ppmvd @15% O2 (equates to 524.0 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
15. Startup and shutdown of the gas turbine, as defined in this permit and in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and two hours for shutdown, per occurrence. Emission concentrations subsequent to this startup period shall not exceed the limits specified in this permit except during shutdown. [40 CFR Subpart A 60.2] Federally Enforceable Through Title V Permit

16. Emissions shall not exceed any of the following limits: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day or VOC: 39.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emissions shall not exceed any of the following limits: NOx (as NO2): 150.6 lb/day or CO: 107.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District Rule 2201] Federally Enforceable Through Title V Permit

19. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [40 CFR 60.332(a)(2) & 60.333(a)] Federally Enforceable Through Title V Permit

20. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 1.1 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 1.1 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. Performance testing shall be conducted under conditions representative of normal operation. [40 CFR 60.335(b), District Rule 4703, 6.3 & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 & 4703, 6.2] Federally Enforceable Through Title V Permit

23. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

25. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

26. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rules 2520, 9.4.2 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

27. The owner or operator shall maintain all records for a period of five years from the date of entry and shall make such records available to the APCO upon request. [District Rules 1080 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

28. Daily records of NOx and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
29. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

30. Permittee shall comply in full with Rule 4001 (New Source Performance Standards, 40 CFR 60 Subpart GG) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

31. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

32. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

33. Note: Formerly S-1129-51.
PERMIT UNIT REQUIREMENTS

1. Cogeneration unit shall include Allison Model 501-KB-5 48.7 MMBTU/hr gas-fired engine, synchronous electrical generator, unfired 22.5 MMBTU/hr steam generator, and inlet air evaporative cooler. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Turbine lube oil tank and generator gearbox lube oil tank shall vent only through fiber bed filter system or other District-approved control Device. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

4. Gas turbine engine shall be equipped with water injection system for NOx control. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Gas turbine engine water injection rate shall be no less than 0.8/1.0 water to fuel ratio by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Gas turbine engine shall be equipped with continuously recording water to fuel injection rate monitoring system accurate to within +/- 5%. [District Rule 2201 & 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

7. If water injection system is inoperative, gas turbine shall be shut down. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Evaporative cooler shall use only fresh and filtered water. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Maximum emission rate of volatile organic compounds (VOC’s) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Compliance testing of lube oil vent and gearbox vent shall be required if visible emissions from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District Rule 1081] Federally Enforceable Through Title V Permit

12. Fuel gas sulfur content shall not exceed 19.5 ppmv as hydrogen sulfide (H2S) or 1.1 gr/100 scf as total fuel sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Except during periods of startup and shutdown, emissions rates shall not exceed any of the following limits: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr or VOC: 1.65 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Except during periods of startup and shutdown, emissions rates (three hour rolling average) shall not exceed any of the following limits: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 150.6 lb/day) or CO: 200 ppmvd @15% O2 (equates to 524.0 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

15. Startup and shutdown of the gas turbine, as defined in this permit and in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and two hours for shutdown, per occurrence. Emission concentrations subsequent to this startup period shall not exceed the limits specified in this permit except during shutdown. [40 CFR Subpart A 60.2] Federally Enforceable Through Title V Permit

16. Emissions shall not exceed any of the following limits: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day or VOC: 39.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emissions shall not exceed any of the following limits: NOx (as NO2): 150.6 lb/day or CO: 107.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 & 2201] Federally Enforceable Through Title V Permit

19. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [40 CFR 60.332(a)(2) & 60.333(a)] Federally Enforceable Through Title V Permit

20. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 1.1 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 1.1 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rules 1081, 9.4.2] Federally Enforceable Through Title V Permit

21. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. Performance testing shall be conducted under conditions representative of normal operation. [40 CFR 60.335(b), District Rule 4703, 6.3 & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 & 4703, 6.2] Federally Enforceable Through Title V Permit

23. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

24. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

25. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

26. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rules 2520, 9.4.2 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

27. The owner or operator shall maintain all records for a period of five years from the date of entry and shall make such records available to the APCO upon request. [District Rules 1080 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA
8-1547-1062-6 Sep 28 2011 2:50PM - GOUGHD
28. Daily records of NOx and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

30. Permittee shall comply in full with Rule 4001 (New Source Performance Standards, 40 CFR 60 Subpart GG) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

31. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

32. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

33. Note: Formerly S-1129-52.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1068-6

SECTION: NW13  TOWNSHIP: 26S  RANGE: 20E

EQUIPMENT DESCRIPTION:
140 BHP DETROIT-ALLISON MODEL #50437001 DIESEL-FIRED IC ENGINE USED TO START A GAS TURBINE

PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

2. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

3. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. Operation of the engine shall not exceed 20 hours per year. Additional operating hours may be approved by the APCO if the permittee provides justification on a case-by-case basis. [District Rule 4702, 4.2.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

5. During operation of the engine, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

6. The permittee shall maintain monthly records of the date and number of hours of operation and records of operational characteristics monitoring. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit


These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

2. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

3. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. Operation of the engine shall not exceed 20 hours per year. Additional operating hours may be approved by the APCO if the permittee provides justification on a case-by-case basis. [District Rule 4702, 4.2.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

5. During operation of the engine, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

6. The permittee shall maintain monthly records of the date and number of hours of operation and records of operational characteristics monitoring. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1070-6
SECTION: NW13 TOWNSHIP: 26S RANGE: 20E
EQUIPMENT DESCRIPTION:
140 BHP DETROIT-ALLISON MODEL #50437001 DIESEL-FIRED IC ENGINE USED TO START A GAS TURBINE

PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit
2. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit
3. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit
4. Operation of the engine shall not exceed 20 hours per year. Additional operating hours may be approved by the APCO if the permittee provides justification on a case-by-case basis. [District Rule 4702, 4.2.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
5. During operation of the engine, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
6. The permittee shall maintain monthly records of the date and number of hours of operation and records of operational characteristics monitoring. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
7. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
8. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The exhaust stack shall not be fitted with a rain cap or similar device that would impede vertical exhaust flow. [District Rule 4102] Federally Enforceable Through Title V Permit

3. NOx emission shall not exceed 5.8 g/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The PM10 emission shall not exceed 0.16 g/hp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

6. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 2201, 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit
11. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

12. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

13. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District Rule 2201] Federally Enforceable Through Title V Permit

2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District Rule 2201] Federally Enforceable Through Title V Permit

3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. VOC emissions shall not exceed the following 0.006 lb/sq ft-day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. The sand basin surface area shall not exceed 2,500 sq.ft. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
ATTACHMENT B

Previous Title V Operating Permit
STEAM GENERATORS
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method-19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel-being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit

15. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 111.0 lb/day, SOx (as SO2): 7.5 lb/day, VOC: 10.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up shutdown and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERy ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-1-29 Sep 7 2011 9:37AM -- 2:05PM
32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

37. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-3-27
EXPIRATION DATE: 05/31/2007

SECTION: 26 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPO RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER, A FLUE GAS RECIRCULATION (FGR) SYSTEM, AND A SO2 SCRUBBER SHARED WITH S-1547-1, (#26 DIS# 19952-75) (ANDERSON/FITZGERALD DEHY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1322 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit

14. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

15. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

22. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Performance testing for NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

29. Performance testing for NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

30. If permittee fails any performance testing for NOx or CO emissions when testing not less than once every 36 months, compliance with NOx and CO emissions testing shall be less than once every 12 months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3031, D4084, D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1995 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
34. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

35. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h)) and 60.48c. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This steam generator is approved to operate at the following locations: NW/4 Section 12, T29S, R21E and Section 34, T28S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

15. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within at least the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4306] Federally Enforceable Through Title V Permit
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2201] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
20. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

23. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

25. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Emission rates shall not exceed any of the following: PM10: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

27. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

28. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

29. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

30. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

34. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

35. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

39. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

40. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-12-24
EXPIRATION DATE: 05/31/2007

SECTION: 28  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#35 DIS# 20602-76) WITH O2 CONTROLLER & FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. Steam generator shall be equipped with O2 controller and excess O2 shall be maintained between 0.5 and 3.0%. [District Rule 4305]

5. Staged combustion shall be removed or rendered inoperable. [District NSR Rule]

6. Only PUC-quality natural gas shall be used as fuel. [District NSR Rule]

7. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rule 2201 and Rule 4305]

8. The steam generator shall be equipped with an FGR valve positioning indicator. [District Rule 4305]

9. Except during periods of steam generator startup/shutdown, steam generator shall not be operated unless flue gas recirculation system is operating. [District Rule 4305]

10. Steam generator may be equipped with a programmable logic controller (PLC). [District Rule 4305]

11. The acceptable range of flue gas recirculation (FGR) valve settings shall be established by testing emissions from this or other representative unit(s) as approved by the District. The acceptable maximum and minimum FGR valve settings shall be the settings with which compliance with applicable NOx and CO emission rates have been demonstrated through District approved source testing. [District Rule 4305]

12. The acceptable range of FGR valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305]

13. If the flue gas recirculation valve setting deviates from the acceptable range, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the flue gas recirculation valve settings are not corrected promptly, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits at the observed flue gas recirculation valve setting. [District Rule 4305]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
14. Permittee shall record the FGR valve position and date and time when the FGR valve position was checked on a weekly basis. Permittee shall record any corrective action taken to maintain the FGR setting within the acceptable range. Permittee shall maintain records of date and duration of each startup and each shut down. Records shall be retained for a period of two years and shall be made readily available for District inspection upon request. [District Rule 1070]

15. Compliance source testing shall be conducted under conditions representative of normal operation except during establishment of acceptable minimum and maximum FGR valve settings. [District Rule 1081]

16. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305]

17. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305]

18. If permittee fails any compliance demonstration for NOx and CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305]

19. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the District, will satisfy the NOx and CO source testing requirement. [District Rule 4305]

20. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, and 4351]

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]

22. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. [District Rule 1081]

23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-13-19
EXPIRATION DATE: 05/31/2007

SECTION: 28  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (MAXWELL #36 (NORTH MIDWAY), DIS #20604-76)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-13-19  Apr 27 2011 8.31AM - GOUGH
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (11) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This generator is permitted to operate at the following locations: NE 1/4 Section 27 of Township 31S, Range 22E and Section 28 of Township 28S, Range 21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-13-19 Apr 27 2011 2:14AM 5000440
San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-16-22 EXPIRATION DATE: 05/31/2007
SECTION: 34 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#12-2M, DIS# 20625-76)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This steam generator is approved to operate at the following locations: NW/4 Section 12, T29S, R21E and Section 34, T28S, R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District NSR Rule] Federally Enforceable Through Title V Permit

15. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081; 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc except 60.44c(g) and (h) and 60.48c. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Natural gas combusted in this unit shall consist primarily of methane and contain less than 5% by weight hydrocarbons heavier than butane. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.004 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 6.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-22-30

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
               BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
           KERN COUNTY, CA

SECTION: NW12 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER, O2 CONTROLLER, AND FLUE GAS RECIRCULATION (#12-2E DIS# 21944-76): DESIGNATE AS A RULE 4306 COMPLIANT DORMANT EMISSIONS UNIT

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520]

2. No modification to this unit shall be performed without an Authority to Construct (ATC) for such modifications, except for changes specified in the conditions below. [District Rule 2201]

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306]

4. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4306]

5. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306]

6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4306]

7. This unit may not be operated after the applicable compliance schedule from Rule 4320, unless a valid ATC is implemented that approves the changes allowing this unit to comply with the applicable requirements of Rule 4320. [District Rule 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Conditions for S-1547-22-30 (continued) 

8. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081]

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]

10. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2]

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1]

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2]

19. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including processed gas and purchased gas with a sulfur content not to exceed 2.8 gr/100 scf. [District NSR Rule]

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425]

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425]

CONDITIONS CONTINUE ON NEXT PAGE
22. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 12.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District NSR Rule]

23. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306]

24. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080]

25. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306]

26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]

27. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306]

28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]

30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

31. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070]

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]
34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, and 4306]

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]

37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2 [District NSR Rule and District Rule 4305] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

6. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

7. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-24-19
EXPIRATION DATE: 05/31/2007

SECTION: V, TOWNSHIP: V, RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#47, DIS# 21944-77)

PERMIT UNIT REQUIREMENTS

1. Approved locations for this steam generator are: NE12 T30S R21E (Calso Lease) and Sec. 33 T28S, R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District NSR Rule] Federally Enforceable Through Title V Permit

3. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1, and 4306, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
0-1547-24.19:
Apr 27 2011 2:24PM - GOGHD
10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.5.6] Federally Enforceable Through Title V Permit

14. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4305, 6.1.5 and 4306, 6.1.4] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

23. All source test emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4305 (amended August 21, 2003). [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

26. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070, 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320] Federally Enforceable Through Title V Permit

33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emission rates from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu (as SO2), NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District NSR Rule and District Rule 4305] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

6. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

7. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-40-29
SECTION: 33 TOWNSHIP: 28S RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR WITH O2 CONTROLLER (#51, DIS# 21904-78)

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
20. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of
units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted
value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input
(rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is
owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable
Through Title V Permit

21. All units in a group for which representative units are source for NOx and CO emissions shall have received the same
maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed
according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for
each unit in the group. Records shall be maintained for the each unit of the group including all preventative and
corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall
be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel
type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to
undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally
Enforceable Through Title V Permit

23. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number
of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will
have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of
three 30-minute test runs for NOx and CO. [District Rules 2520, 9.3.2 and 4305, 6.3] Federally Enforceable Through
Title V Permit

25. Natural gas fuel sulfur content shall not exceed 19.3 gr S/100 scf. [District Rule 2201] Federally Enforceable Through
Title V Permit

26. Emission rates shall not exceed any of the following: PM10: 0.058 lb/MBtu, SOx (as SO2): 0.055
lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3%
O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

27. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be
established by testing emissions from this unit or other representative units, as approved by the District. The
acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO
emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through
Title V Permit

28. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis.
[District Rule 4305] Federally Enforceable Through Title V Permit

29. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more
than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable
Through Title V Permit

30. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam
generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator
permit. [District Rule 4305] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing
rate. The records must also include a description of any corrective action taken to return the atmospheric combustion
air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam
generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally
Enforceable Through Title V Permit

32. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the
atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule
4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

34. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

35. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

39. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.035 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2; or CO: 25.8 ppmv @3% O2. [District NSR Rule and District Rule 4305] Federally Enforceable Through Title V Permit

5. SOx scrubber shall be utilized whenever vapor recovery gas is burned in this unit. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Scrubber mist eliminator shall be properly cleaned and maintained. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Scrubber SO2 control efficiency shall be maintained at no less than 95%. [District NSR Rule] Federally Enforceable Through Title V Permit

10. No less than 0.5 miles of roadway shall be paved and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit

11. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

12. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

15. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

17. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. SOx scrubber shall be utilized whenever vapor recovery gas is burned in this unit. [District Rule 2201]

6. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule]

7. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District Rule 2201]

8. Emissions from this unit shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305]

9. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201]

10. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701]

11. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]

12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

13. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. SOx scrubber shall be utilized whenever vapor recovery gas is burned in this unit. [District Rule 2201]

6. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule]

7. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District Rule 2201]

8. Emissions from this unit shall not exceed any of the following: PM10: 0.058 lb/MBtu, SOx (as SO2): 0.063 lb/MBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MBtu, or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305]

9. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201]

10. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701]

11. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]

12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

13. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-59-24

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 20 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS-FIRED STEAM GENERATOR, WITH A
COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND SO2 SCRUBBER (#72 DIS# 27454-81): REPLACE
EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL
MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT;
OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-59-24: May 9 2011 3:27 PM – GOUGH: Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306 and 4320] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit

17. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

18. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

22. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

23. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

24. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

25. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 94.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7,665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

26. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of startup, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmv NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, 4306 and 4320] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-60-23
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS:
PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION:
HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 20  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A
COEN QLN-ULN 3.2 LOW NOX BURNER, FLUE GAS RECIRCULATION, AND SO2 SCRUBBER (#73 DIS# 28624-82):
REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN
MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR
EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320
COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306 and 4320] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

17. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Scrubber liquid pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

21. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6628; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, and 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

24. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 94.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7,665 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but not longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, 4306 and 4320] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-61-23
SECTION: 20  TOWNSHIP: 28S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS-FIRED STEAM GENERATOR, WITH FLUE GAS
RECIRCULATION AND SO2 SCRUBBER (#74 DIS# 28625-82)

PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except
for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable
Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all
necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable
District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last
Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San
Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a
period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission
limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8
consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content
source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2]
Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr.
[District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance
with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing
the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the
sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in
combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V
Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit

20. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

21. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Emission rates shall not exceed any of the following: PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

25. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305, 5.4.2] Federally Enforceable Through Title V Permit

26. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305, 5.4.2] Federally Enforceable Through Title V Permit

27. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305, 5.4.2] Federally Enforceable Through Title V Permit

28. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305, 5.4.2] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305, 6.1] Federally Enforceable Through Title V Permit

30. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305, 5.4.2] Federally Enforceable Through Title V Permit

31. Performance testing for NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

32. Performance testing for NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

33. If permittee fails any performance testing for NOx or CO emissions when testing not less than once every 36 months, compliance with NOx and CO emissions testing shall be less than once every 12 months. [District Rule 4305, 6.3] Federally Enforceable Through Title V Permit

34. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2] Federally Enforceable Through Title V Permit

35. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305,6.3.2] Federally Enforceable Through Title V Permit
36. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

37. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

38. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

39. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

40. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3031, D4084, D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

41. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This equipment is approved to be operated at the following locations: Section 18, T28S/R21E and NW/4 Section 12, T29S/R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit

14. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit

During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

May 3, 2011 - 11:31 AM - DURCH
23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
6-1547-62-21: May 3 2011 11:37AM — GOUGHD
32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-62-21 May 3 2011 11:37 AM - DOUG/D
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This equipment is approved to be operated at the following locations: Section 18, T28S/R21E and NW/4 Section 12, T29S/R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit

14. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MBtu, SOx (as SO2): 0.055 lb/MBtu, VOC: 0.003 lb/MBtu, NOx (as NO2): 0.018 lb/MBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-66-20                              EXPIRATION DATE: 05/31/2007
SECTION: NW12  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR [#12-2B, DIS# 22467-79) WITH A COEN QLN-ULN AND WITH FLUE GAS RECIRCULATION (FGR)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN COUNTY, CA
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This equipment is approved to be operated at the following locations: Section 18, T28S/R21E and NW/4 Section 12, T29S/R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit

14. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 19.3 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.055 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305;4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 82.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-67-23
EXPIRATION DATE: 05/31/2007
SECTION: 34  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR #82 DIS# 27573-81 WITH O2
CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District NSR Rule and District Rule 4305] Federally Enforceable Through Title V Permit

5. No less than 0.8 miles of roadway shall be paved and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit

6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

7. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

8. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

9. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

12. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit.

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit.

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit.

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District NSR Rule and District Rule 4305] Federally Enforceable Through Title V Permit.

5. No less than 0.8 miles of roadway shall be paved and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit.

6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit.

7. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit.

8. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit.

9. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit.

10. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit.

11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit.

12. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rule 108.1 (Kern)] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 one-hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. This requirement shall not supersede a more stringent NSR or PSD permit testing requirement. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. All units in a group for which representative units are source tested to for NOx and CO emissions shall be fired on the same fuel type during the entire compliance period. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

23. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

25. Approved locations for this steam generator are: Sec. 28 T28S R21E and SE26 T29S R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permitee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District NSR Rule and Rule 4305] Federally Enforceable Through Title V Permit

29. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

30. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

31. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

32. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit
34. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

35. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

36. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

37. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

38. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

40. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

41. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-74-25
EXPIRATION DATE: 05/31/2007

SECTION: NW12  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR #12-2F (DIS # 21938-76 EQUIPPED WITH A COEN QLN-ULN BURNER AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Not less than 0.5 miles of roadway shall be paved and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit

13. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
Permit Unit Requirements for S-1547-74-25 (continued)

31. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

32. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

19. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

20. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.3.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

24. Approved locations for this steam generator are SE33 T28S R21E (gen. site 3346 or 3356), NW01 T28S R20E (gen. site 121), NW34 T28S R21E and NE34 T28S R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Scrubber shall be utilized whenever vapor recovery gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

29. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

30. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

32. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Emission rates shall not exceed any of the following: PM10: 0.0138 lb/MMBtu, SOx (as SO2): 0.015 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 47.5 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

34. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

35. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
36. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

37. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

38. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

39. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

40. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

41. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

42. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

43. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

44. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

45. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

46. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-78-30

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

SECTION: NE29 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER, WITH FLUE GAS RECIRCULATION, SHARED SO2 SCRUBBER LISTED ON S-1547-77, AND PIPING FROM S-1547-1079 (EAST FLANK LEASE), (#89, DIS# 27471-80) (GEN SITE 2972): REMOVE REFERENCE OF SCRUBBER AND TEOR/WASTE GAS FUELS FROM PERMIT, AND ADD FIRED SOLELY ON NATURAL GAS (REVISED, 2/11/10)

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of certified gas delivered and copies of quality terms of certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing. [District Rules 2080, 4305, and 4306] Federally Enforceable Through Title V Permit

17. The unit shall only be fired on natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

18. When natural gas fired, emission rates except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.014 lb/MBtu, SOx (as SO2): 0.002 lb/MBtu, NOx (as NO2): 0.018 lb/MBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2 [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO₂; sulfur - 200 pounds of SO₂ per hour, or 2000 ppmv as SO₂, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO₂ - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOX, CO, and O₂ at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

21. If either the NOₓ or CO concentrations corrected to 3% O₂, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NOx and CO concentrations corrected to 3% O₂, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. During the 36-month source testing interval, the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit’s operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. [District Rule 4306] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

30. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201]

6. Emissions from this unit shall not exceed any of the following: NOx (as NO2): 30 ppmv @3% O2; or CO: 400 ppmv @3% O2. [District Rule 4305]

7. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201]

8. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701]

9. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]

10. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-86-25  
EXPIRATION DATE: 05/31/2007  
SECTION: NW12  
TOWNSHIP: 29S  
RANGE: 21E  
EQUIPMENT DESCRIPTION:  
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM (#12-2D DIS# 21828-78)  

PERMIT UNIT REQUIREMENTS  

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit  

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit  

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit  

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit  

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit  

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit  

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit  

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. No less than 3.0 miles of roadway shall be paved and properly maintained with hot mix asphalt material at South Belridge field on Poleline Road from the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District NSR Rule] Federally Enforceable Through Title V Permit

13. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

32. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit.

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit.

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit.

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit.

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit.

6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit.

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit.

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit.

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit.

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

18. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

19. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
20. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

23. Approved locations for this steam generator are: NE, NW, SE, SW 1/4 Section 34, T28S, R21E; SE 1/4 Section 26, T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Permitee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

27. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

28. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

29. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

30. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permitee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

31. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

34. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit
35. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

39. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-92-29  ISSUANCE DATE: 07/07/2010

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW12  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER, O2 CONTROLLER AND FLUE GAS RECIRCULATION (DIS# 27580-80) (12-2G): REPLACE BURNER WITH A GIDEON MODEL MGW-63V2 ULTRA LOW NOX BURNER

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-92-29, Aug 11, 2011 2:09PM - GDQHID - Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4405, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.7 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.007 lb/MMBtu, SOx (as SO2): 0.009 lb/MMBtu, VOC: 0.007 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

15. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

17. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
19. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

13. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.007 lb/MMBtu, SOx (as SO2): 0.009 lb/MMBtu, VOC: 0.007 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

15. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

17. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

18. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

20. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

14. NOx emission rate shall not exceed 30 ppmv @ 3% O2. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.007 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.007 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]

22. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

27. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-114-16  
EXPIRATION DATE: 05/31/2007

SECTION: NW35  
TOWNSHIP: 12N  
RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER, O2 CONTROLLER AND FLUE GAS RECIRCULATION, (MOCO #708 (SOUTH MIDWAY), DIS# 27477-81)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Natural gas combusted in this unit shall consist primarily of methane and contain less than 5% by weight hydrocarbons heavier than butane. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.004 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 6.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permitee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permitee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permiitee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable
emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but
no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the
following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a
source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305
and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions
representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated,
maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol
approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either
taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out
over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2
concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of
exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken
to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through
Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal
operations or conditions specified in the Permit to Operate. No determination of compliance shall be established
within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within
30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally
Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least
once every twelve (12) months (no more than 30 days before or after the required annual source test date). After
demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every
thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of
the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing
frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable
Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District
Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be
submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District
within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) -
EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A
or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content
analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for
H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM
D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
[District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection
upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

19. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMbtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit
20. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

24. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Emission rates shall not exceed any of the following: NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 47.5 ppmv @ 3% O2. [District NSR Rule and Rule 4305] Federally Enforceable Through Title V Permit

26. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

27. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

28. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

29. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

31. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit
34. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

35. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

39. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 30 ppmv @3% O2; or CO: 400 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

6. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

7. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-118-19
EXPIRATION DATE: 05/31/2007
SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS FIRED STEAM (#121 DIS# 27575-81) (GEN SITE 2886) WITH A COEN MODEL #QLN-ULN 3.2 BURNER WITH FLUE GAS RECIRCULATION (FGR) AND JOHN ZINK/TODD COOL FUEL SYSTEM

PERMIT UNIT REQUIREMENTS


2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: 
AERc ENERGY LLC

Location: 
HEAVY OIL WESTERN STATIONARY SOURCE.KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. This unit is approved to operate at the following locations: SW28-T28S-R21E, NE35-27S-20E, and S7-T28S-R21E [District Rule 2201]

6. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 2201]

7. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201]

8. NOx emissions from this unit shall not exceed any of the following: NOx (as NO2): 30 ppmv @3% O2, or 400 ppmv CO @3% O2. [District Rule 4305]

9. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201]

10. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701]

11. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]

12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

13. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-120-12
EXPIRATION DATE: 05/31/2007

SECTION: SW20  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#147, DIS# 27484-81) WITH
O2 CONTROLLER (GEN SITE 121).

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the
requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable
Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable
requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for
changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated
produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201]

6. Emissions from this unit shall not exceed any of the following: NOx (as NO2): 30 ppmv @3% O2; or CO: 400 ppmv
@3% O2. [District Rule 4305]

7. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit
shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value
analysis of each fuel source. [District Rule 2201]

8. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of
recommencing operation of this unit. [District Rule 4701]

9. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule
1081]

10. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily
available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Approved locations for this steam generator are: Sec. 12 T30S R21E and Sec. 07 T30S R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

17. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

31. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

33. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

34. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-122-19
EXPIRATION DATE: 05/31/2007

SECTION: V
TOWNSHIP: V
RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A COEN ULN BURNER, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#132, DIS# 28714-83) (CALS0 LEASE)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), and 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Approved locations for this location are: Sec. 12 T30S R21E and Sec. 13 T30S R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 and 4306] Federally Enforceable Through Title V Permit

17. During a period not to exceed 60 calendar days from date of initial operation of modifications authorized by this ATC, but in no case after June 1, 2005, NOx emission rate shall not exceed 30 ppmv @ 3% O2. Permittee shall maintain a record of the date of initial operation and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

20. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit
22. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable
emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but
no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable
emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the
following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a
source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must
then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the
deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply
with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and
4306]

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2
concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of
exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken
to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through
Title V Permit

24. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative
of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be
established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or
longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and
4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as
provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance
is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title
V Permit

27. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every
36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months.
[District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB
certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be
submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District
within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) -
ARB Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB
Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or
double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-
89. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
[District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for
District inspection upon request. [District Rules 1070, 2201, 4305, and 4306] Federally Enforceable Through Title V
Permit

33. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records
shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District
inspection upon request. [District Rules 1070 and Rule 4320]
34. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-123-24

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

SECTION: NE29 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM, SCRUBBER LISTED ON S-1547-77 AND PIPING FORM S-1547-1079, (#133, DIS# 28715-83) (GEN SITE 2972): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED ONE TIME - 5/24/11 JAS)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rules 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

16. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

20. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

21. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, CO: 50 ppmv @ 3% O2. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: NOx (as NO2): 54.0 lb/day and 7,665 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

25. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, 4320 and 2520] Federally Enforceable Through Title V Permit

27. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3031, D4084, D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

36. When CVR or TVR gas fired, District-witnessed compliance source testing for PM10 emission rate shall be conducted within 60 days prior to the permit anniversary once every three years, after demonstrating compliance on two consecutive annual source tests. [District Rules 1081 and District NSR Rule] Federally Enforceable Through Title V Permit

37. Emissions of SOx, without regard to any flue gas desulfurization, shall not exceed 70 tons/year. Permittee shall keep accurate annual records of the amount of each type of gas combusted, the sulfur content of each type of gas combusted, and a running total of the uncontrolled SOx emissions. [40 CFR Part 64] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-125-23

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW01  TOWNSHIP: 28S  RANGE: 20E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN 3.2 BURNER AND FLUE GAS RECIRCULATION (#135, DIS# 28717-83) (GEN SITE 121): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed.Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801, 3.1] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart D (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District NSR Rule] Federally Enforceable Through Title V Permit


14. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

16. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.14 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 7,665 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 4306, 4306 and 4320] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-126-16
EXPIRATION DATE: 05/31/2007

SECTION: NE34  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX
BURNER AND FLUE GAS RECIRCULATION (#12-2J, DIS# 28708-83)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and h and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.7 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

18. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-127-19
EXPIRATION DATE: 05/31/2007

SECTION: NE34  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN QLN ULN 3.2 BURNER, O2 CONTROLLER, FLUE GAS RECIRCULATION (#12-2K, DIS# 28709-83), AND A JOHN ZINK/TODD COOL FUEL SYSTEM

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 0.75 gr/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

16. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permitee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor H2S content of the gas prior to incineration in affected steam generators on a daily basis. If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rules 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Only PUC quality dry gas shall be utilized as fuel. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Natural gas combusted in this unit shall consist primarily of methane and contain less than 5% by weight hydrocarbons heavier than butane. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.004 lb/MMBtu, VOC: 0.060 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 6.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
Permit Unit Requirements

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit.

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit.

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit.

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit.

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit.

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit.

7. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit.

8. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit.

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit.

Permit Unit Requirements Continue on Next Page.

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with the conditions of this permit, the fuel higher heating value for each fuel shall be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. The concentration of sulfur compounds in the exhaust from this unit shall not exceed 0.2% by volume as measured on a dry basis over a 15 minute period (Kern County Rule 407). To demonstrate compliance with this requirement the operator shall do one of the following: fire the unit only on PUC or FERC regulated natural gas; or test the sulfur content of each fuel source and demonstrate the sulfur content does not exceed 3.3% by weight for gaseous fuels; or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera), 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

19. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

24. Approved locations for this equipment: Section 35 (SW quarter), T28S, R21E; and Section 26 (SE quarter), T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Emission rates shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 47.5 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

28. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

29. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

30. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

31. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

33. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

34. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
35. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

36. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

37. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

40. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-134-15
EXPIRATION DATE: 05/31/2007

SECCTION: V  TOWNSHIP: V  RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR), APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS, (#167, DIS# 28638-82)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This steam generator is authorized to operate at multiple locations: NE 1/4 Sec 13, T28S, R21E and Anderson-Fitzgerald Lease SE 1/4 Sec 2, T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr 5/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 3.2 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 52.5 lb/day or 16,425 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
32. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, VOC: 0.006 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4801 and Kern County Rule 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown, and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.7 lb/day, VOC: 9.0 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

24. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - from the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only asphalt concrete shall be used as road paving material. [District NSR Rule] Federally Enforceable Through Title V Permit


17. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including vapor recovery gas, produced gas, and purchased gas. [District NSR Rule] Federally Enforceable Through Title V Permit

22. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

23. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
26. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

27. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

29. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MBtu, SOx (as SO2): 0.063 lb/MBtu, VOC: 0.003 lb/MBtu, NOx (as NO2): 0.018 lb/MBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

31. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

32. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

36. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
37. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

38. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

39. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

40. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3031, D4084, D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

41. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

42. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

43. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

44. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 2520, 9.3.2 and 4301, 5.2.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 2520, 9.3.2 and 4301, 5.2.1] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1, and 4306, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.5.6] Federally Enforceable Through Title V Permit

14. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4305, 6.1.5 and 4306, 6.1.4] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MBtu, SOx (as SO2): 0.063 lb/MBtu, VOC: 0.003 lb/MBtu, NOx (as NO2): 0.018 lb/MBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 200 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

22. All source test emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4305 (amended August 21, 2003). [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

25. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Methods 6, 6B, or 8, or ARB Methods 8 or 100 and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 - EPA Method 201A and 202, or EPA Method 5 (assume all PM is PM10). [District Rules 1081, 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

30. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Only asphalt concrete shall be used as road paving material. [District NSR Rule] Federally Enforceable Through Title V Permit

32. Caltrans Standard Specifications for paving and materials shall be fully satisfied. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

35. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

38. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

39. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

41. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070; 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

44. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

45. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-143-24
SECTION: 26  TOWNSHIP: 29S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULN LOW NOX BURNER, WITH FLUE GAS RECIRCULATION AND SHARED SO2 SCRUBBER LISTED ON S-1547-141, (#128 DIS# 28612-82) [ANDERSON/FITZGERALD DEHY]

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA
5-1547-143-24: Jun 13 2011 10 42AM — Gough

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only asphalt concrete shall be used as road paving material. [District NSR Rule] Federally Enforceable Through Title V Permit


17. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including vapor recovery gas, produced gas, and purchased gas. [District NSR Rule] Federally Enforceable Through Title V Permit

22. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit
23. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Scrubber liquor pH shall be maintained between 6.15 and 7.5 and shall be continuously monitored. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

27. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

29. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

31. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

32. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

33. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
34. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

35. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

38. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

39. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

40. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

41. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

42. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

43. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

44. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

45. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

46. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
47. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. No less than 3.0 miles of roads shall be paved and properly maintained with hot mix asphalt material at permittee's South Belridge field on Poleline Road - From the intersection of Main Camp Road to 1/2 mile north of Entrance 'D'. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


17. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

21. This unit shall be fired exclusively on natural gas, which may consist of one or a mixture of fuels including vapor recovery gas, produced gas, and purchased gas. [District Rule 2201] Federally Enforceable Through Title V Permit

22. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

27. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 and 4306] Federally Enforceable Through Title V Permit

29. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.058 lb/MMBtu, SOx (as SO2): 0.063 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

31. Emission rates shall not exceed any of the following: PM10: 87.0 lb/day, SOx (as SO2): 94.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

32. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
35. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

38. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

39. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

40. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

41. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

42. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

43. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

44. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

45. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-145-27

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 12 TOWNSHIP: 30S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH A COEN ULN BURNER AND FLUE GAS RECIRCULATION, AND SHARED SO2 SCRUBBER LISTED ON S-1547-141.

#130 DIS# 28721-33) (CALSO) ALTERNATE MONITORING SCHEME A: DESIGNATE AS COMPLIANT DORMANT EMISSION UNIT

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

4. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit, at which time this permit will be administratively modified to remove DEU references. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

5. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

6. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. A source test to demonstrate compliance with NOx and CO emission limits and a fuel sulfur content certification shall be performed within 60 days of recommencing operation of this unit. [District Rules 2201 and 4306] Federally Enforceable Through Title V Permit

8. Upon recommencing operation, all required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

9. Upon recommencing operation, copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

11. Upon recommencing operation, when complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Upon recommencing operation, when complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Upon recommencing operation, if the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Upon recommencing operation, if fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. Upon recommencing operation, duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

20. Upon recommencing operation, duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Upon recommencing operation, permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

22. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

24. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

25. Upon recommencing operation, the permittee shall monitor and record the stack concentration of NOX, CO, and O2 and the NOX and CO concentrations shall be corrected to 3% O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

26. Upon recommencing operation, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection if the NOX, CO, and O2 concentrations, as measured by the portable analyzer, exceed the allowable emissions concentration. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

27. Upon recommencing operation, the permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Upon recommencing operation, during the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

 CONDITIONS CONTINUE ON NEXT PAGE
29. Upon recommencing operation, all emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Upon recommencing operation, source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. Upon recommencing operation, whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

32. Upon recommencing operation, source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. Upon recommencing operation, if permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. Upon recommencing operation, compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

35. Upon recommencing operation, the District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Upon recommencing operation, for emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

40. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-146-24

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE29 TOWNSHIP: 28S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL GAS/VAPOUR RECOVERY GAS-FIRED STEAM GENERATOR (#124, DIS# 27578-81), WITH A COEN ULN LOW NOX BURNER, O2 CONTROLLER, FLUE GAS RECIRCULATION, & SO2 SCRUBBER SHARED BETWEEN S-1547-77, ‘-78, ‘-123, ‘-124, ‘-135, ‘-136 & ‘-146 (GEN SITE 2972): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE (RENEWED ONE TIME - 5/24/11 JAS)

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1, and 4306, 6.2.1] Federally Enforceable Through Title V Permit

10. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

11. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.015 lb/MMBtu, SOx (as SO2): 0.030 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

14. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: NOx (as NO2): 54.0 lb/day or 7665 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

16. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit
17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MBBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
26. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

29. Scrubber shall be located on site. Duct work to steam generators may be blinded off or removed. [District Rule 2080] Federally Enforceable Through Title V Permit

30. Scrubber shall be utilized whenever TEOR gas is incinerated in steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. [District Rule 1070 and Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

33. When scrubber is in operation, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Scrubber recirculation liquid pH shall be maintained only by the addition of caustic unless prior approval for an alternative pH maintenance method is received from the District. [District NSR Rule] Federally Enforceable Through Title V Permit

35. Scrubber liquor pH shall be maintained above 6.15 and shall be continuously monitored. Compliance shall be determined on a three-hour rolling average. [District NSR Rule] Federally Enforceable Through Title V Permit

36. Scrubber liquor pH shall be observed and recorded weekly during operation of this unit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. Records of scrubber liquor pH shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070; 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-147-9  EXPIRATION DATE: 05/31/2007
SECTION: SW27  TOWNSHIP: 28S  RANGE: 21E
EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#125, DIS# 27579-81) WITH O2 CONTROLLER.

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]
4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]
5. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District Rule 2201]
6. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 30 ppmv @3% O2, or 400 ppmv CO @3% O2. [District Rule 4305]
7. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 2201]
8. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701]
9. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]
10. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
11. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SVJUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), and 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This generator is approved to operate at the following locations: Sec. NE12, T30S, R21E and Sec. NW18, T30S, R22E. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 and 4306] Federally Enforceable Through Title V Permit

17. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MBBtu, SOx (as SO2): 0.003 lb/MBBtu, VOC: 0.003 lb/MBBtu, NOx (as NO2): 0.018 lb/MBBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN COUNTY, CA
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

33. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

34. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This generator is approved to operate at the following locations, SW Sec. 35, T28S, R21E, Sec. 06, T28S, R20E and SE Sec. 26, T29S, R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

17. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit
33. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]

34. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-158-13
EXPIRATION DATE: 05/31/2007

SECTION: V TOWNSHIP: V RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND A FLUE GAS
RECIRCULATION (FGR) SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#155, DIS# 33303-89) (CALSO)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This generator is approved to operate at the following locations: Sec. NE12, T30S, R21E and Sec. 34, T30S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

14. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4306] Federally Enforceable Through Title V Permit

16. Natural gas fuel sulfur content shall not exceed 1.8 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.005 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

18. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

19. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit
33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-159-16
EXPIRATION DATE: 05/31/2007

SECTION: 16  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH COEN QLN LOW NOX BURNER (#A-1 DIS# 39578-88) (LOCKWOOD) AND FLUE GAS RECIRCULATION

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
8. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit

10. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 and 4306, 6.1.4] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

13. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

14. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

15. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5.4 and 4306, 5.5.4] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306, 6.3.1] Federally Enforceable Through Title V Permit

19. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2, and 4306, 5.5.2] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Source testing to demonstrate compliance with NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

22. Source testing to demonstrate compliance with NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

23. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months until compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

24. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10 b or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2 and 4306, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This generator is approved to operate at the following locations, NE Sec. 35, T32S, R23E; Sec. 08, T32S, R21E and SW Sec. 35, T28S, R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4305, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Only asphalt concrete shall be used as road paving material. [District NSR Rule] Federally Enforceable Through Title V Permit


15. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 b/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.3.1] Federally Enforceable Through Title V Permit

21. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306, 6.1.14] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e., the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit


15. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.070 lb/MMBtu, SOx (as SO2): 0.092 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, and 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 105.0 lb/day, SOx (as SO2): 138.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Only asphalt concrete shall be used as road paving material. [District NSR Rule] Federally Enforceable Through Title V Permit


15. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 4201, 4301, 4305, 4405, 4406, 4408, 4409 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4408, 4409 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6.1 and 4306, 5.3.1] Federally Enforceable Through Title V Permit

21. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306, 6.1.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AER ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
6-1547-175-21 Jun 13 2011 11:57AM - GOGHD
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

34. S-1547-175 will not operate simultaneously with S-1547-190 in the area defined by District Rule 2201 Section 4.3.4.1.2 comprised of Section 22, NE/4 Section 21, SE/4 Section 21, NE/4 Section 28, NW/4 Section 27, and NE/4 Section 27. [District NSR Rule] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. While dormant, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

2. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306] Federally Enforceable Through Title V Permit

4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Only asphalt concrete shall be used as road paving material. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Caltrans Standard Specifications for paving and materials shall be fully satisfied. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Compliance with particulate matter offset requirements shall be demonstrated by District inspection of roads annually 60 days prior to permit anniversary. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

23. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

24. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
25. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

26. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

27. Permittee monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit
33. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-179-18
EXPIRATION DATE: 05/31/2007

SECTION: SE16  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR THERMOTICS NATURAL GAS FIRED STEAM GENERATOR (#J-5 DIS# 27465-71) WITH O2 ANALYZER/CONTROLLER

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. Emissions from this unit shall not exceed any of the following: PM10; 0.008 lb/MMBtu, SOx (as SO2); 0.003 lb/MMBtu, VOC; 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2; or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305]

6. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule]

7. Steam generator firebox convection section and all flue gas ductwork shall be maintained to minimize emissions to the atmosphere.

8. Steam generator shall be equipped with O2 controller.

9. No less than 1.65 miles of roadway shall be paved with asphalt concrete and maintained in good repair.

10. Only PUC-quality natural gas shall be used as fuel.

11. Compliance testing shall be conducted annually or as required by the District-approved plan.

12. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]

13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

14. The permittee shall maintain records of fuel usage for each day of operation, in the format approved by the District.

15. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-187-10
EXPIRATION DATE: 05/31/2007

SECTION: SE21  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#J-6 DIS# 28771-85) WITH O2 ANALYZER/CONTROLLER (GORE)

PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]
3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]
4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]
5. Emissions from this unit shall not exceed any of the following: PM10; 0.008 lb/MMBtu, SOx (as SO2); 0.003 lb/MMBtu, VOC; 0.003 lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2; or CO: 25.8 ppmv @3% O2. [District Rules 2201, 4305]
6. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule]
7. Steam generator firebox convection section and all flue gas ductwork shall be maintained to minimize emissions to the atmosphere.
8. Steam generator shall be equipped with O2 controller.
9. Only PUC-quality natural gas shall be used as fuel.
10. Compliance testing shall be conducted annually or as required by the District-approved plan.
11. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081]
12. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
13. The permittee shall maintain records of fuel usage for each day of operation, in the format approved by the District.
14. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-190-20

EXPIRATION DATE: 05/31/2007

SECTION: V  TOWNSHIP: V  RANGE: V

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER, FLUE GAS RECYCLINATION, VAPOR RECOVERY PIPING FROM S-1135-21, AND APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (BUENA FE #6, DIS# 4624-82)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-190-20; Jun 13 2011 11:27AM - D0060D
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Approved locations for this steam generator are: NE22 32S 23E, SW22 T31S R22E. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.034 lb/MMBtu, SOx (as SO2): 0.220 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

18. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

19. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit
21. If either the NOX or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, 4351] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.015 lb/MMBtu, SOx (as SO2): 0.066 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

18. If NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit’s operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

21. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

22. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

25. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT Requirements

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT Requirements continue on next page

These terms and conditions are part of the Facility-wide Permit to Operate.
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. During a period not to exceed 60 calendar days from date of initial operation of modifications authorized by this ATC, but in no case after June 1, 2005, NOx emission rate shall not exceed 30 ppmv @ 3% O2. Permittee shall maintain a record of the date of initial operation and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.015 lb/MMBtu, SOx (as SO2): 0.066 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

22. If periodic monitoring of NOX, CO, and O2 concentrations is utilized and the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

23. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, then the permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. If periodic determination of FGR rate by O2 measurement is utilized, the flue gas recirculation rate shall be determined at least on a weekly basis by measuring the stack O2% by volume (Os), and windbox O2% by volume (Ow) using the following equation: FGR rate = (Ow - 20.9)/(Os - 20.9) x 100%. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 1 day of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If periodic determination of FGR rate by O2 measurement is utilized, the minimum flue gas recirculation rate shall be established by source testing this unit or other representative units as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NOX and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If periodic determination of FGR rate by O2 measurement is utilized and if the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
27. If periodic determination of FGR rate by O2 measurement is utilized, the permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Source testing to measure NOx and CO emissions shall be conducted within 60 days of initial start-up of this unit. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

31. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

38. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

39. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

41. Prior to or concurrent with the implementation of this ATC, a sufficient number of the following permits shall be canceled to fully mitigate the CO emissions increase: S-1547-11, '-14, '-19, '-32, '-48, '-55, '-56, '-80, '-81, '-85, '-93, '-129, '-140, '-173, '-179, '-187, '-189, '-254, '-256, '-257, '-570, '-574, '-575, '-576, '-578, '-673, '-698, '-1036, '-1037, '-1058, '-1074, '-1075, '-1086, and '-1090 shall be canceled. [District Rule 2201] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070] Federally Enforceable Through Title V Permit

3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel combusted and all dates on which unit is fired on any uncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

17. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as S02): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rule 2201, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

20. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

29. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-242-14
EXPIRATION DATE: 05/31/2007
SECTION: 01 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH MITSUBISHI LO-NOX BURNER, STAGED COMBUSTION, FLUE GAS RECIRCULATION AND VAPORECOVERY PIPING FROM S-1547-707, (#101, DIS# 28693-82) (D&E SANDS) - DORMANT EMISSIONS UNIT (DEU)

PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070] Federally Enforceable Through Title V Permit
2. When designated as a dormant emissions unit, the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit
3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306] Federally Enforceable Through Title V Permit
4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
6. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit
7. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
8. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit
9. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Upon recommencing operation, when complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Upon recommencing operation, when complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 and 4306] Federally Enforceable Through Title V Permit

22. Upon recommencing operation, emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as SO2): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Upon recommencing operation, emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

24. Upon recommencing operation, emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, VOC: 4.2 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

25. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Upon recommencing operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

31. Upon recommencing operation, source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. Upon recommencing operation, source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
33. Upon recommencing operation, if permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070] Federally Enforceable Through Title V Permit

2. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306] Federally Enforceable Through Title V Permit

4. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

17. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as SO2): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

20. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, VOC: 4.2 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

24. If either NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

27. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

29. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit.
[District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for
District inspection upon request. [District Rules 1070, 2520, 4305, and 4306] Federally Enforceable Through Title V
Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-244-22
EXPIRATION DATE: 05/31/2007

SECTION: 01 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH MITSUBISHI LO-NOX BURNER, STAGED COMBUSTION, FLUE GAS RECIRCULATION AND VAPORECOVERY PIPING FROM S-1547-707, (#103, DIS# 28694-82) (D&E SANDS)

PERMIT UNIT REQUIREMENTS

1. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070] Federally Enforceable Through Title V Permit

2. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306] Federally Enforceable Through Title V Permit

4. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

17. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.0192 lb/MMBtu, SOx (as SO2): 0.0537 lb/MMBtu, VOC: 0.0028 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

20. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102,4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 28.8 lb/day, SOx (as SO2): 80.6 lb/day, VOC: 4.2 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

24. If either NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

27. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

29. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

30. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

31. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992). [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

15. During a period not to exceed 60 calendar days from date of initial operation of modifications authorized by this ATC, but in no case after June 1, 2005, NOx emission rate shall not exceed 30 ppmv @ 3% O2. Permittee shall maintain a record of the date of initial operation and shall make such records available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.015 lb/MMBtu, SOx (as SO2): 0.066 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of daily volume of natural gas and daily volume of vapor recovery gas incinerated, and maintain a log of calculated daily SO2 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx, and CO emissions shall be conducted within 60 days of initial start-up of this unit. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

29. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Approved locations for this steam generator are: SW20 T28S R21E, Sec. 08 T32S R23E and SE26 T29S R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

17. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of annual heat input (MMBtu) for this unit on a calendar year basis. Such records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and Rule 4320]
33. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
PERMIT UNIT REQUIREMENTS

1. When designated as dormant, the fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

2. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306] Federally Enforceable Through Title V Permit

4. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

5. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit


17. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

**PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE**

These terms and conditions are part of the Facility-wide Permit to Operate.
24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
**San Joaquin Valley**  
**Air Pollution Control District**

**PERMIT UNIT REQUIREMENTS**

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. This steam generator is approved to operate at the following locations: Sec. NE35, T27S, R20E and Sec. 28, T28S, R21E. [District Rule 2201]

5. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201]

6. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201]

7. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rule 2201 and Rule 4305]

8. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305]

9. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305]

10. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305]

11. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305]

12. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305]

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**PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE**

These terms and conditions are part of the Facility-wide Permit to Operate.
13. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305]

14. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District Rule 1081]

15. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4351]

16. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351]

17. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351]

18. Source test results from an individual unit that is identical to this unit, in terms of rated capacity, operational conditions, fuel used, and control method, as approved by the APCO, will satisfy the NOx and CO source testing requirement. [District Rules 4305 and 4351]

19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081]

20. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

21. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4351]

22. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-357-19
EXPIRATION DATE: 05/31/2007

SECTION: Var.  TOWNSHIP:  RANGE:

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR DANIEL INDUSTRIES NATURAL GAS FIRED STEAM GENERATOR #160 DIS# 39601-88
WITH NORTH AMERICAN BURNER ASSEMBLY AND O2 CONTROLLER; ALSO APPROVED TO OPERATE AT
VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable
   requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for
   changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable
   Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003
   lb/MMBtu, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @3% O2. [District NSR
   Rule and District Rule 4305] Federally Enforceable Through Title V Permit

5. This steam generator is approved to operate at the following locations: Sec. NE35, T27S, R20E and Sec. NE35, T27S,
   R20E. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess
   of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District
   Rule 1070] Federally Enforceable Through Title V Permit

7. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of
   recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

8. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule
   1081] Federally Enforceable Through Title V Permit

9. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
   Federally Enforceable Through Title V Permit

10. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated
    produced gas and purchased gas with a sulfur content not to exceed 1.1 gr/100 scf. [District NSR Rule] Federally
    Enforceable Through Title V Permit

11. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit
    shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value
    analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily
    available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. This permit unit shall not be operated unless the owner or operator applies to modify the Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-361-23
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 12  TOWNSHIP: 30S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (#150, DIS# 39562-88) (CALS0): DESIGNATE AS DORMANT EMISSIONS UNIT

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. No modification to this unit shall be performed without an Authority to Construct for such modifications, except for changes specified in the conditions below. [District Rule 2010]

3. Upon seven days prior written notice to the District, this unit may be designated as a dormant emissions unit or an active emissions unit. [District Rule 2080]

4. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080]

5. While dormant, normal source testing, fuel sulfur certification, and monitoring shall not be required. [District Rule 2080]

6. Upon recommencing operation of this unit, normal source testing and monitoring shall resume. [District Rule 2080]

7. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
8. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1080]

9. If this unit has become dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2010]
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

18. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

19. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

20. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

23. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District Rules 2201 and 4305] Federally Enforceable Through Title V Permit

25. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

26. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

27. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

28. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

30. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

31. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

33. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit
37. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily
available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOX) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. This requirement shall not supersede a more stringent NSR or PSD permit testing requirement. [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

19. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

20. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

24. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 25.8 ppmv @ 3% O2. [District NSR Rule and Rule 4305] Federally Enforceable Through Title V Permit

26. The acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels for which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

27. The atmospheric combustion air control valve position and fuel firing rates shall be recorded at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit

28. If the atmospheric combustion air control valve position or fuel firing rate deviate from the acceptable range for more than 20 minutes, the steam generator shall be automatically shutdown. [District Rule 4305] Federally Enforceable Through Title V Permit

29. The acceptable range of atmospheric combustion air control valve position shall be documented for each steam generator in a District approved plan. Permittee shall maintain a copy of the current plan with the steam generator permit. [District Rule 4305] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of the weekly atmospheric combustion air control valve position and fuel firing rate. The records must also include a description of any corrective action taken to return the atmospheric combustion air control valve position and fuel firing rate to the acceptable range. Permittee shall maintain records of steam generator automatic shutdown and corrective action taken prior to restarting the unit. [District Rule 4305] Federally Enforceable Through Title V Permit

31. Within two hours after a continuous period in which fuel flow to the unit has been shut off for 30 minutes or longer the atmospheric combustion air control valve and fuel firing rate shall be returned to the acceptable range. [District Rule 4305] Federally Enforceable Through Title V Permit

32. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rule 4305] Federally Enforceable Through Title V Permit

33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rule 4305] Federally Enforceable Through Title V Permit

34. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305] Federally Enforceable Through Title V Permit

35. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
37. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081 and 4305] Federally Enforceable Through Title V Permit

38. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rule 108.1 (Kern)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), and 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

11. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 and 4306] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as S02): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

14. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

15. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

16. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

17. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. Source testing to demonstrate compliance with NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. Source testing to demonstrate compliance with NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months until compliance has been demonstrated on two consecutive annual tests. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

22. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10 b or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-683-4
EXPIRATION DATE: 05/31/2007

SECTION: SW22  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIROULATION (W-10, DIS# 34142-93, S.N. 51106-01) (WIER #10)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

13. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 2.8 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.02 lb/MMBtu or 27 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

17. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit

13. Maximum annual heat input of the unit shall not exceed 30 billion Btu per calendar year. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 2.8 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.008 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.02 lb/MMBtu or 27 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

17. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv, low hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-697-25 ISUSSANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164 BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

SECTION: SW01 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR, EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TOOD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION (#1-1A, DIS# 28617-82): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-697-25: Aug 15 2011 4:23PM - DOUGHS: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The concentration of sulfur compounds in the exhaust from this unit shall demonstrate compliance using one of the following: test the sulfur content of each fuel source or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 12.0 lb/day, SOx (as SO2): 4.5 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit
18. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedence. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306 and 4320] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-709-18

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2, DIS# 5401-72) (BELRIDGE 3-2): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]

3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320]

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

5. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320]

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

You must notify the district compliance division at (661) 392-5500 when construction is completed and prior to operating the equipment or modifications authorized by this authority to construct. This is not a permit to operate. Approval or denial of a permit to operate will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this authority to construct, and to determine if the equipment can be operated in compliance with all rules and regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this authority to construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2, and 4320]

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.3.2 and 4320]

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; and 4320, 6.2.1]

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.3] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule and Rule 4320]

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

19. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 4301, 4305, 5.1, 4306, 5.1, 4320, 4405 and Kern County Rule 425 and PSD SJ 78-11]
22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320]

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

30. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3, 4306, 6.3, and 4320, 6.3]

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1, 4306, 5.5.1, and 4320]

34. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2, and 4320]

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5, 4306, 5.5.5, and 4320]

37. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 6.1, 4306, 6.1, and 4320]

39. Formerly S-1511-7

40. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
45. Facility shall conduct annual performance tests for SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Performance tests for SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081. (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit
20. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

21. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

22. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

23. The number of representative units source tested for NOx and CO emissions shall be at least 30% of the total number of units in the group. The units included in the 30% shall be rotated, so that in 3 years, all units in the entire group will have been tested at least once. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.3.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

25. Emissions rates shall not exceed any of the following: PM-10 0.005 lb/MMBtu, SO2 0.002 lb/MMBtu, NOx 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC 0.003 lb/MMBtu, and CO 1.3 ppmv @ 3% O2. [District Rule 4305 and District Rule 2201] Federally Enforceable Through Title V Permit

26. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted within 60 days of start-up and not less than once every 12 months thereafter, except as provided below. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

29. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months, if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

30. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4351] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The acceptable settings for the flue gas recirculation valve shall be established by testing emissions from this unit or other representative units as approved by the District. The acceptable settings shall be those for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing. [District Rule 4305] Federally Enforceable Through Title V Permit

33. The flue gas recirculation valve settings shall be inspected at least on a weekly basis. [District Rule 4305] Federally Enforceable Through Title V Permit
34. The permittee shall maintain records of the date and time of flue gas recirculation valve settings, and the observed setting. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve setting to within the acceptable range. These records shall be retained at the facility for a period of no less than 2 years and shall be made available for District inspection upon request. [District Rule 4305] Federally Enforceable Through Title V Permit

35. If the flue gas recirculation valve setting deviates from the acceptable range, the permittee shall notify the District and take corrective action within one (1) hour after detection. If the flue gas recirculation valve settings are not corrected promptly, the permittee shall conduct an emissions test within 60 days, utilizing District-approved test methods, to demonstrate compliance with the applicable emissions limits at the observed flue gas recirculation valve settings. [District Rule 4305] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826-88 or D1945-81 in conjunction with ASTM D3588-89. [District Rules 1081, 4305, and 4351] Federally Enforceable Through Title V Permit

37. Formerly S-1511-32 [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-722-14

AUTHORITY TO CONSTRUCT

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW01 TOWNSHIP: 2S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL #QLN-ULN 3.2 LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) (#1-1C, BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-1547-722-14 / Aug 16 2011 9:53AM – GOUGHD : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-6500 • Fax (661) 392-5985
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4531, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4320, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed any of the following limits: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
19. Emission rates shall not exceed any of the following limits: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operations. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-47
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Natural gas fuel sulfur content shall not exceed 0.75 gr /100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

34. Formerly S-1511-48

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-725-14
EXPIRATION DATE: 05/31/2007

SECTION: SW01  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

5. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

6. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit

7. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The total gas fired in this unit, on a monthly average, shall be less than 50% PUC quality natural gas (as defined in Rule 4320), by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. The permittee shall maintain monthly records of the volume of PUC quality natural gas (as defined in Rule 4320) and the total gas fired in this unit. Permittee shall keep monthly records of the percentage by volume of PUC quality gas fired and indicate if the volume of PUC quality gas fired is less than 50%. [District Rule 4320] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit

15. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

21. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

29. Formerly S-1511-50

30. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
31. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

32. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

33. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

34. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

35. Facility shall conduct annual performance tests for SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. Performance tests for SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT NO: S-1547-726-16  

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC  
MAILING ADDRESS: PO BOX 11164  
BAKERSFIELD, CA 93389-1164  

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE  
KERN COUNTY, CA  

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E  

EQUIPMENT DESCRIPTION: MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (#3-2P) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE  

CONDITIONS  

1. Authority to Construct (ATC) S-1547-726-15 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]  
2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit  
3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit  
4. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305, 4306, and 4320]  
5. This equipment shall not be operated for any reason until fees have been paid pursuant to sections 5.1.2, 5.2.5, and 5.3, and/or an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rules 4305, 4306, and 4320]  
6. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit, at which time this permit will be administratively modified to remove DEU references. [District Rules 4305, 4306, and 4320]  

CONDITIONS CONTINUE ON NEXT PAGE  

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.  

Seyed Sadredin, Executive Director / APCO
7. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

8. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305, 4306, and 4320]

9. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

10. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

13. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.4.2, and 4320]

14. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Unit shall be equipped with the following: natural gas volume flowmeter, TEOR non-condensible gas volume flowmeter, and continuous operation flue gas oxygen monitor/controller. [District Rule 2201 and 4320]

21. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

22. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule]

25. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

26. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

27. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801, and Kern County Rule 424] Federally Enforceable Through Title V Permit

28. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

29. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425]

30. Emissions during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801, and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

31. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

32. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of startup, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

33. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]
34. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

35. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

36. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

37. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

38. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

39. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

40. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

41. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

42. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
43. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, and 4320]

44. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

45. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4305, 4306, and 4320]

46. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

47. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

48. Note: Formerly S-1511-53
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-727-18

ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS:
PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION:
HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A COEN MODEL #QLN-ULN 3.2 LOW-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND AN OXYGEN ANALYZER/CONTROLLER (#3-2A) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]

3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320]

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

5. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320]

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.4.2 and 4320]

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

19. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]
30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 4306, and 4320]

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

37. Formerly S-1511-54
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-728-19

ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2B) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]

3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320]

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

5. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320]

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-728-19 • Aug 16 2011 10:44AM • GOUDHO • Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320]

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.3.2 and 4320]

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

19. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]
21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit

24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]
30. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19; fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 4306, and 4320]

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

38. Note: Formerly S-1511-55
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-729-17
ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DORMANT 62.5 MMBTU/HR STRUTHERS GAS FIRED STEAM GENERATOR, WITH A COEN MODEL ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#3-2K, DIS #5406-74) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305, 4306, and 4320]

4. This equipment shall not be operated for any reason until fees have been paid pursuant to sections 5.1.2, 5.2.5, and 5.3, and/or an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rules 4305, 4306, and 4320]

5. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit, at which time this permit will be administratively modified to remove DEU references. [District Rules 4305, 4306, and 4320]

6. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-729-17: Sep 7 2011 12:51PM - GOUGH : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305, 4306, and 4320]

8. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.4.2 and 4320]

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

21. Permittee shall maintain records of daily quantity, higher heating value and sulfur content of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

23. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

24. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

25. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

26. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320]

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, 4320, and Kern County Rules 424 and 425]

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, 4320, and Kern County Rules 424 and 425]
31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

32. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

33. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, and 4320]

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

39. Formerly S-1511-58
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-733-16

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR, WITH A
COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOUR CONTROL
SYSTEM S-1547-359. (#2-3F) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE
4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-733-13 shall be implemented prior to or concurrently with this ATC. [District
   Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
   of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time
   for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

15. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

17. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

18. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

19. Emissions from this unit shall not exceed 0.005 lb-PM10/MBtu. [District Rules 2201, 4201, and 4301]

20. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-SOx/MMBtu (as SO2). [District Rules 2201, 4301, 4320, 4406, and 4801]

21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]
22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

24. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

30. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, 6.2, and 4320]

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

38. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

39. Formerly S-1511-65

40. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
44. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-734-19

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR C.E. NATCO GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#3-2L) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]

3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320]

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

5. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320]

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.4.2 and 4320]

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]
19. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4406, 4801, and Kern County Rule 425]

22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2, 4306, 5.4, and 4320]

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4, and 4320, 5.7.1]

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]
29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, and 4320]

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320].

37. Formerly S-1511-66
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-735-18

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03   TOWNSHIP: 29S   RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMSTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN ULN BURNER, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (BELRIDGE #3-2D): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-735-15 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-735-18 : Sep 18 2011 11:05AM — GOUGH
Southern Regional Office  •  34946 Flyover Court  •  Bakersfield, CA 93308  •  (661) 392-5500  •  Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320]

10. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201]

12. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

16. Emissions from this unit shall not exceed 0.005 lb-PM10/MMBtu. [District Rules 2201, 4201, and 4301]

17. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-SOx/MMBtu (as SO2). [District Rules 2201, 4301, 4320, 4406, and 4801]

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, and 4405]

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit
20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320]

26. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

33. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070, 2201, and 2520, 9.5.2] Federally Enforceable Through Title V Permit

34. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

35. Formerly S-1511-67
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-736-17

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (BELRIDGE #3-2E): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-736-14 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-736-17: Sep 10 2011 11:03AM—GOUGH: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2, 4305, 6.3, 4306, and 4320]

10. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320]

11. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

15. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

19. Emissions from this unit shall not exceed 0.005 lb-PM10/ MMBtu. [District Rules 2201, 4201, and 4301]

20. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-S0x/ MMBtu (as SO2). [District Rules 2201, 4301, 4320, 4406, and 4801]

CONDITIONS CONTINUE ON NEXT PAGE
21. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @3% O2, VOC: 0.003 lb/MMBtu or CO: 1.9 ppmv @ 3% O2. [District Rule 2201, 4301, 4305, 4306, and 4320]

22. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2201 and 4320]

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070, 2201, 2520, 9.5.2] Federally Enforceable Through Title V Permit

32. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

33. Formerly S-1511-68
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-737-15

ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MM BTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER,
JOHN ZINK/TODD COOL FUEL SYSTEM, FLUE GAS RECIRCULATION (FGR) SYSTEM, OXYGEN
MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359
(BELRIDGE #3-2G): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-737-12 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320]

10. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201]

12. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 ds cf. [District Rule 4320]

18. Emissions from this unit shall not exceed 0.005 lb-PM10/MMBtu. [District Rules 2201, 4201, and 4301]

19. When fired exclusively on natural gas emissions from this unit shall not exceed 0.002 lb-S0x/MMBtu (as S02). [District Rules 2201, 4301, 4320, 4406, and 4801]

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]
21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306, and 4320]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

36. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

37. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

38. Formerly S-1511-69
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-738-12

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A
COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM
VAPOR CONTROL SYSTEM S-1547-359, (#3-2F) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL
QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX
BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND
LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.

Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
6-1547-738-12: Jun 19 2011 1:30PM - 00000H: Joint Inspection NOT Required

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5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

18. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424]
19. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: \[ PM10 = \frac{(7.0 \text{ lb/day}) + (249.2 \text{ lb/day}) \times (\text{fraction of total TEOR gas incinerated in this unit during testing})}{24 \text{ hr/day}} \]. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

38. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

39. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Formerly S-1511-70
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-742-15
ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-742-12 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320]

10. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201]

12. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 2520, 9.3.2 and 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801, and Kern County Rule 424]

19. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {((7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/24 hr/day}. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

CONDITIONS CONTINUE ON NEXT PAGE
21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

36. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Formerly S-1511-81

39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

5. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

7. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

12. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

13. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

14. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

18. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel sulfur gas content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

32. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

33. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

34. Formerly S-1511-81

35. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

36. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

37. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

38. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. SOX (as S02) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Performance tests for NOx and SOx (as S02) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-743-15
ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR
EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS
RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2I)
(BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-743-12 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-743-15: Sep 16 2011 11:32AM — GOUGH JOINT INSPECTION NOT REQUIRED
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District Rules 2201 and 4320]

10. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201]

12. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on non-certified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MBMBlu or SOx (as SO2): 0.002 lb/MBMBlu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

19. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBlu, NOx (as NO2): 0.014 lb/MMBlu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBlu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]
21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour, or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

CONDITIONS CONTINUE ON NEXT PAGE
30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

36. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070, and Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Formerly S-1511-82

39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-744-16

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS- FIRED STEAM GENERATOR WITH A
COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM
VAPOUR CONTROL SYSTEM S-1547-359, (#2-3G) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100
DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-744-13 shall be implemented prior to or concurrently with this ATC. [District
Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quantity terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time
for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201]

11. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District Rules 2201 and 4320]

12. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

14. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

16. If the unit is fired on uncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

17. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

19. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rules 424]

20. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {((7.0 lb/day)+(249.2 lb/day)\(\text{fraction of total vapor recovery gas gas incinerated in this unit during testing})/24 \text{hr/day})}. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
21. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

24. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

38. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

51. Formerly S-1511-83
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-745-18

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS-FIRED STEAM GENERATOR WITH A
COEN MODEL QLN-ULN 3.2 LOW-NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-
CONDENSIBLE PIPING FROM VAPORECOVERY SYSTEM S-1547-359, (#2-3A) (BELRIDGE): LIMIT FUEL GAS
SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-745-15 shall be implemented prior to or concurrently with this ATC. [District
   Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
   of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time
   for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

12. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

13. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

14. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

15. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

16. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

17. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

18. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425]

CONDITIONS CONTINUE ON NEXT PAGE
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

22. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

26. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

28. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2 and 4320] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

36. There are no sulfur compounds daily emission limits (DELS) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

37. Formerly S-1511-84

38. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

39. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

42. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
43. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-746-17

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY,
FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR
CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF
FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-746-14 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, 6.2, and 4320] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Formerly S-1511-85

39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-747-16
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
ISSUANCE DATE: 06/19/2011
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA
SECTION: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-747-13 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-747-16: Sep 16 2011 11:32AM - OUGHTHD: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.3.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D1826 or D1945 in conjunction with ASTM D3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1, 4320]

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality-produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MBtu, NOx (as NO2): 0.014 lb/MBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District NSR Rule, 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.3.2 and 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 4306, and 4320]

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Formerly S-1511-86

39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-748-16
ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A
COEN QLN-ULN ULTRA LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM
VAPOR CONTROL SYSTEM S-1547-359 (#2-3D) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100
DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-748-13 shall be implemented prior to or concurrently with this ATC. [District
Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time
for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425] Federally Enforceable Through Title V Permit

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

24. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 4306, and 4320]

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Formerly S-1511-87

39. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

40. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

41. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
42. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

43. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

44. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-749-13

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SE02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH
COEN MODEL QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, NON-CONDENSIBLE PIPING FROM
VAPOR CONTROL SYSTEM S-1547-359, (#2-3E) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL
QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX
BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND
LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
   to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
   applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-749-13: Sep 7 2011 1:20PM — GOUGHO : Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

6. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit
19. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

20. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

21. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

22. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

23. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))}/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

24. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

25. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

26. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7,495 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

27. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOx/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

28. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

29. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

37. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
39. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

40. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

41. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

42. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

43. There are no sulfur compounds daily emission limits (DELS) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

44. Formerly S-1511-88

45. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

49. Exhaust gases shall be ducted through operating scrubber(s) at all times during the operation of this unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

50. This unit shall be equipped with excess oxygen control equipment. The concentration of excess oxygen shall not exceed 3%. The excess oxygen level shall be recorded in a permanent record and shall be available for periodic inspection by the District and EPA. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

51. SOX (as SO2) emissions shall not exceed 0.16 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

52. Emission rates shall not exceed any of the following: VOC 0.003 lb/MMBtu. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

53. Facility shall conduct annual performance tests for NOx and SOx and furnish the EPA and the District a written report of the results of such tests. Performance testing may be conducted at any other time specified by the EPA. The tests shall be conducted at the maximum operating capacity of the unit. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

54. Performance tests for NOx and SOx (as SO2) shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and 60.46. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
55. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

56. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu or VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4303, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: VOC: 4.5 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

22. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-754-22

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (#2-5A) (BELRIDGE): DESIGNATE AS DORMANT EMISSIONS UNIT

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. No modification to this unit shall be performed without an Authority to Construct for such modifications, except for changes specified in the conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

3. This unit may be designated as a dormant emissions unit or an active emissions unit. The permittee shall notify the District's Compliance Division by US mail, email or Fax upon redesignating the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. While dormant, the fuel line shall be physically disconnected from the unit. [District Rule 2080] Federally Enforceable Through Title V Permit

5. While dormant, normal source testing and monitoring shall not be required. [District Rule 2080] Federally Enforceable Through Title V Permit

6. If Rule 4320 fee option is selected, permittee shall provide to the District at least (7) calendar days advance notice and pay the applicable fees prior to recommencing operation. [District Rule 2080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-1547-754-22 - Aug 17 2011 4:28PM - GOUGHD : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. If Rule 4320 fee option is not selected, this unit shall not be re-started unless it has been tuned or retrofitted to meet the applicable Rule 4320 NOx limit. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Upon recommencing operation of this unit, normal source testing and monitoring shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

9. Any source testing required by this permit shall be performed within 60 days of recommencing operation of this unit, regardless of whether the unit remains active or is again designated as dormant. [District Rule 2080] Federally Enforceable Through Title V Permit

10. Records of all dates and times that this unit is designated as dormant or active, and copies of all corresponding notices to the District, shall be maintained, retained for a period of at least five years, and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

11. If this unit has been designated as dormant because it does not comply with District Rules, or if the unit becomes out of compliance with District Rules while it is dormant, operation of the unit is not authorized until an Authority to Construct permit is issued approving all necessary retrofits and permit changes required to comply with the respective District Rules. [District Rule 2010] Federally Enforceable Through Title V Permit

12. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

13. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

15. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

18. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

19. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

20. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
21. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

22. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

26. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

27. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District NSR Rule] Federally Enforceable Through Title V Permit

28. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

29. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

31. If FGR system on unit is used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. If FGR system on unit is not used, monitoring shall consist of either use of a portable analyzer or monitoring of stack O2 and burner mechanical adjustments. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

32. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
33. If periodic monitoring of NOX, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall determine the flue gas recirculation rate shall be determined, If periodic monitoring of NOX, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. If periodic determination of FGR rate by O2 measurement is utilized, the flue gas recirculation rate shall be determined at least on a weekly basis by measuring the stack O2% by volume (O_s) and windbox O2% by volume (O_w) using the following equation: FGR rate = (O_w - 20.9)/(O_s - 20.9)) x 100%. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

37. If periodic determination of FGR rate by O2 measurement is utilized, the minimum flue gas recirculation rate shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be no lower than the minimum flue gas recirculation rate with which compliance with applicable NOx and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. If periodic determination of FGR rate by O2 measurement is utilized, and the flue gas recirculation rate is less than the normal range/level, the permittee shall return the flue gas recirculation rate to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation rate is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation rate. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

39. If periodic determination of FGR rate by O2 measurement is utilized, the permittee shall maintain records of the date and time of oxygen concentration measurements, the measured oxygen concentrations, the calculated flue gas recirculation rate, and the firing rate at the time of the oxygen concentration measurements. The records shall also include a description of any corrective action taken to maintain the flue gas recirculation rate within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. If monitoring of burner mechanical adjustments and O2 concentration is utilized, the stack O2 concentration measurement and inspection of [list mechanical adjustments/settings] shall be conducted at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

41. If monitoring of burner mechanical adjustments and O2 concentration is utilized, the normal range/level of stack O2 concentration and visible mechanical burner settings shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

42. If monitoring of burner mechanical adjustments and O2 concentration is utilized, normal range or level for the stack O2 concentration and burner mechanical settings shall be re-established during each source test required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

43. If monitoring of burner mechanical adjustments and O2 concentration is utilized, and either the stack O2 concentration or visible mechanical burner settings are less than the normal range/level, the permittee shall return the stack O2 concentration and visible mechanical burner settings to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the stack O2 concentration and visible mechanical burner settings are not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new stack O2 concentration and visible mechanical burner settings. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

44. If monitoring of burner mechanical adjustments and O2 concentration is utilized, the permittee shall maintain records of the date and time of O2 measurements and burner adjustments, the measured O2 concentrations (% by volume) and firing rate at the time of O2 measurement, and the observed setting(s) for the burner. The records must also include a description of any corrective action taken to maintain the O2 concentration and the burner mechanical settings within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

45. If periodic determination of FGR rate by O2 measurement or monitoring of burner mechanical adjustments and O2 concentration is utilized, during the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

46. If periodic determination of FGR rate by O2 measurement or monitoring of burner mechanical adjustments and O2 concentration is utilized, and the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306] Federally Enforceable Through Title V Permit

47. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
48. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

49. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

50. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

51. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

52. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

53. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

54. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

55. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

56. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

57. Note: Formerly S-1511-110
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

28. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Note: Formerly S-1511-111

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4305 and 4306]

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801]

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306]

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080]

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 4306]

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]
21. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306]

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

25. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201]

26. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]

29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2]

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

35. Note: Formerly S-1511-112

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-757-14
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (#2-5J) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-757-14: Sep 7 2011 1:29PM - OOU2J3D: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

21. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/ MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Note: Formerly S-1511-114
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-758-18  ISSUANCE DATE: 07/26/2010

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
                  BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX
BURNER AND FLUE GAS RECIRCULATION (#2-5G) (BELRIDGE): DESIGNATE AS A RULE 4306 COMPLIANT
DORMANT EMISSIONS UNIT

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
   of District Rule 2520. [District Rule 2520]

2. No modification to this unit shall be performed without an Authority to Construct (ATC) for such modifications,
   except for changes specified in the conditions below. [District Rule 2201]

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306]

4. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant
   emissions unit. [District Rule 4306]

5. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or
   monitoring requirements otherwise required by this permit. [District Rule 4306]

6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of
   recommencing operation of this unit. [District Rule 4306]

7. This unit may not be operated after the applicable compliance schedule from Rule 4320, unless a valid ATC is
   implemented that approves the changes allowing this unit to comply with the applicable requirements of Rule 4320.
   [District Rule 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
8. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081]

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]

10. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2]

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1]

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2]

19. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District NSR Rule]

20. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District NSR Rule]

21. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule]

22. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425]
23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 200 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425]

24. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District NSR Rule]

25. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306]

26. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080]

27. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306]

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]

29. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306]

30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]

32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

33. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070]

34. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule]
35. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2]

36. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

37. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]

38. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

39. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2]

40. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]

41. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

42. Note: Formerly S-1511-115
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-759-13
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH FLUE GAS RECIRCULATION (#2-5H) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District’s determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010].

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit.

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit.

8. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit.

9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit.

10. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit.

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit.

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit.

13. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit.

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit.

15. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit.

16. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit.

18. Emission rates shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SO2: 0.002 lb/MMBtu, NOx: 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO 1.3 ppmv @ 3% O2. [District Rules 2201 and 4305, 5.1] Federally Enforceable Through Title V Permit

19. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

21. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

23. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

29. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

30. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

33. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-116
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-760-13

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

SECTION: NE03

TOWNSHIP: 29S

RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION, COEN QLN-ULN BURNER AND JOHN ZINK/TODD COOL FUEL SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3H) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment. [District Rule 2010] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredo, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

20. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

21. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

22. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

23. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

24. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

25. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan, NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

26. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7,495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

27. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

28. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule] Federally Enforceable Through Title V Permit

29. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

37. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
39. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

40. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

41. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

42. There are no sulfur compounds daily emission limits (DELS) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Formerly S-1511-117

44. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

45. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

46. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

47. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 78-11] Federally Enforceable Through Title V Permit

48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 78-11] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-761-18

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
                      BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A
COEN ULN BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL
SYSTEM S-1547-359. (#3-2M) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA
LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT
GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO
12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
   applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
   by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
   that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
   equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This IS NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadreddin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Unit shall be equipped with the following: natural gas volume flowmeter and TEOR non-condensible gas volume flowmeter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

21. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.0 lb/day) + (249.2 lb/day) x (fraction of total TEOR gas incinerated in this unit during testing)) / (24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

24. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 7,495 lb/year, or CO: 44.0 lb/day [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

25. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 15 ppmvd @ 3% O2 or 0.018 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

26. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

37. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

38. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070] Federally Enforceable Through Title V Permit

39. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

40. Steam generator shall be operated at no greater than 97.78 percent of maximum design capacity heat input. [District NSR Rule] Federally Enforceable Through Title V Permit

41. NOTE: Formerly S-1511-118
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-762-16

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DORMANT 62.5 MMBTU/HR NATURAL GAS/VAPOREVOY RECOVERY GAS FIRED STEAM
GENERATOR WITH A COEN MODEL QLN-ULN ULTRA LOW-NOX BURNER, WITH FLUE GAS RECIRCULATION AND
NON-CONDENSIBLE PIPING FROM VAPOREVOY CONTROL SYSTEM S-1547-359. (#3-2N) (BELRIDGE): LIMIT FUEL GAS
SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-762-15 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

4. The fuel supply line shall be physically disconnected from this unit. [District Rules 4305, 4306, and 4320]

5. This equipment shall not be operated for any reason until fees have been paid pursuant to sections 5.1.2, 5.2.5, and 5.3, and/or an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4320 and all other applicable District regulations. [District Rules 4305, 4306, and 4320]

6. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit, at which time this permit will be administratively modified to remove DEU references. [District Rules 4305, 4306, and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
7. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

8. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305, 4306, and 4320]

9. All required source testing shall conform to the compliance testing procedures described in District Rule 1081[(Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

10. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

13. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; 
H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

15. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

19. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2, 4305, 6.3, 4306, and 4320]

21. Unit shall be equipped with the following: natural gas volume flowmeter, TEOR non-condensible gas volume flowmeter, and continuous operation flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

23. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201]

25. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

26. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

27. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320 and Kern County Rule 424]

28. When fired exclusively on natural gas emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

29. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201, and 4301] Federally Enforceable Through Title V Permit

30. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

31. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

32. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

33. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

34. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]
35. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

36. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

37. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2, 4306, 5.4.2; and 4320, 5.7.1]

38. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

39. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

40. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

41. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

42. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

43. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 19 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, 4306, and 4320]
44. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

45. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

46. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070] Federally Enforceable Through Title V Permit

47. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

48. Formerly S-1511-119
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-763-7
EXPIRATION DATE: 05/31/2007
SECTION: SE35   TOWNSHIP: 12N   RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (MOCO #802) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1, and 4306, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.5.6] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4305, 6.1.5 and 4306, 6.1.4] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All source test emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4305 (amended August 21, 2003). [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 4305, 4306, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070, 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

31. Formerly S-1511-120

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2, 4305, 6.2.1, and 4306, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.5.6] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4305, 6.1.5 and 4306, 6.1.4] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

16. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/100scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

17. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

18. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

19. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit
20. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

21. All source test emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4305 (amended August 21, 2003). [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070, 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

31. Formerly S-1511-121
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOX (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOX (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

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Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOX (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4305, 6.2] Federally Enforceable Through Title V Permit
29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

31. Formerly S-1511-122
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBTu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBTU. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBTu, NOx (as NO2): 0.018 lb/MMBTu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBTu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-123
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-767-9
EXPIRATION DATE: 05/31/2007

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPO RECOVERY GAS FIRED STEAM GENERATOR WITH COEN QLN-ULN BURNER AND PIPING FROM TEOR WELL VENT VAPO RECOVERY SYSTEM S-1547-819 (MOCO #605) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District NSR Rule and District Rules 4201, 3.1; 4301, 5.1, 5.2.1, and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule and District Rules 2520, 4201, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6.1 and 4306, 5.3.1] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306, 6.1.4] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.11 Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2.1 and 4306, 5.4.2.1] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit
Permit Unit Requirements for S-1547-767-9 (continued)  

30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

36. Formerly S-1511-124

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-768-10
SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND PIPING FROM TEOR WELL VENT VAPOUR RECOVERY SYSTEM S-1547-819. (MOCO #606) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rules 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
Permit Unit Requirements for S-1547-768-10 (continued) Page 3 of 4

20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-125
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MBTU or SOx (as SO2): 0.002 lb/MBTU. [District Rules 2201, 2520, 4201, 4301, 4304, 4406 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MBTU, NOx (as NO2): 0.018 lb/MBTU or 15 ppmv @ 3% O2, or CO: 0.030 lb/MBTU or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit.

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit.

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit.

36. Formerly S-1511-126

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-770-9
SECNION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOIR RECOVERY GAS FIRED STEAM GENERATOR, WITH COEN UNL BURNER, FLUE GAS RECIRCULATION AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819.
(MOCO #608) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

17. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emissions from this unit, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: NOx (as NO2): 0.018 lb/MBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MBtu or CO: 50 ppmv @ 3% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. PM-10 emissions from the combustion of natural gas in this permit unit shall not exceed 0.005 lb/MBTU. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Sulfur compound emissions (as SO2) from the combustion of natural gas in this permit unit shall not exceed 0.002 lb/MM Btu. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District NSR Rule] Federally Enforceable Through Title V Permit
23. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

24. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

27. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

28. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Performance testing for NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Performance testing for NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. If permittee fails any performance testing for NOx or CO emissions when testing not less than once every 36 months, compliance with NOx and CO emissions testing shall be less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-127
San Joaquin Valley  
Air Pollution Control District  

PERMIT UNIT: S-1547-771-9  
EXPIRATION DATE: 05/31/2007  

SECTION: NW35  
TOWNSHIP: 12N  
RANGE: 24W  

EQUIPMENT DESCRIPTION:  
62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPORECOVERY SYSTEM S-1547-819. (MOCO #701) (SOUTH MIDWAY)  

PERMIT UNIT REQUIREMENTS  

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit  

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any nontcertified fuel and record specific type of nontcertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit  

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit  

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit  

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit  

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit  

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4306, 4406, 4801 and Kern County Rules 424]

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-128

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-772-9 Jun 24 2011 2:46PM — GOUGH
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MBTU or SOx (as SO2): 0.002 lb/MBTU. [District Rules 2201, 2520, 4201, 4301, 4305, 4406, 4408 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MBTU, NOx (as NO2): 0.018 lb/MBTU or 15 ppmv @ 3% O2, or CO: 0.030 lb/MBTU or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-129
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/ MMBTU or SOx (as SO2): 0.002 lb/ MMBtu. [District Rules 2201, 2520, 4201, 4301, 4305, 4406, 4407 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. Formerly S-1511-134
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-778-20
EXPIRATION DATE: 05/31/2007

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A GIDEON MODEL MGW-63R1 LOW NOX BURNER, FLUE GAS RECIRCULATION AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819, MOCO (#506) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.0146 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 7994 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Formerly S-1511-135

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-779-9
PERMIT UNIT REQUIREMENTS

EXPIRATION DATE: 05/31/2007
SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPORECOVERY SYSTEM S-1547-819. (MOCO #703) (SOUTH MIDWAY)

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Formerly S-1511-136

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule; PSD SJ 89-01] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4306, 4406, 4401 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
42. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

52. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

53. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

54. Note: Formerly S-1511-137

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-781-10
EXPIRATION DATE: 05/31/2007

SECTION: NW35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819, (MOCO #705) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule; PSD SJ 89-01] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing from the combustion of natural gas, shall not exceed any of the following: PM10: 0.005 lb/MMBTU or SOx (as SO2): 0.002 lb/MMBTu. [District Rules 2201, 2520, 4201, 4301, 4406, 4801 and Kern County Rules 424] Federally Enforceable Through Title V Permit

19. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit
20. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO\(_2\); sulfur - 200 pounds of SO\(_2\) per hour, or 2000 ppmv as SO\(_2\), or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO\(_2\) - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

21. Emission rates shall not exceed any of the following: VOC: 4.3 lb/day, NO\(_x\) (as NO\(_2\)): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

22. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

23. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

25. The permittee shall monitor and record the stack concentration of NO\(_x\), CO, and O\(_2\) at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. If either the NO\(_x\) or CO concentrations corrected to 3% O\(_2\), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1,100, the permittee may fully comply with Rule 1,100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NO\(_x\), CO, and O\(_2\) measurements, (2) the O\(_2\) concentration in percent and the measured NO\(_x\) and CO concentrations corrected to 3% O\(_2\), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
42. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. Visible emissions shall not exceed «Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

52. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

53. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

54. Note: Formerly S-1511-138

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit.

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit.

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit.

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit.
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - 
EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A 
or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content 
analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for 
H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM 
D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of 
three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. 
[District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection 
upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-140
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MBMtu, SOx (as SO2): 0.002 lb/MBMtu, VOC: 0.003 lb/MBMtu, NOx (as NO2): 0.018 lb/MBMtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MBMtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The following test methods shall be used: NO\textsubscript{x} (ppmv) - EPA Method 7E or ARB Method 100, NO\textsubscript{x} (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SO\textsubscript{x} (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H\textsubscript{2}S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-141

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-784-9
EXPIRATION DATE: 05/31/2007

SECTION: NW11  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN BURNER, WITH FLUE GAS RECIRCULATION (#11-1C) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rule 108.1 (Kern)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 408 (Kern), and 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performance of the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, and 4306, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Note: Formerly S-1511-142

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-785-9: Jun 27 2011 2:30PM — GOUGHD
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-143
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-786-9
EXPIRATION DATE: 05/31/2007

SECTION: NW11  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION (#11-1E) (BELRIDGE)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOX emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOX emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERIAL ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
5-1047-786-9: Jun 27 2011 2:30PM — GOUGHD
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 1.1 gr/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.3 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 52.8 lb/day or 9636 lb/year, or CO: 44.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

18. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-144
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-787-11  
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A
COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE VAPOR PIPING
FROM VAPOR CONTROL SYSTEM S-1547-714. (#401A) (LOST HILLS): REPLACE EXISTING BURNER WITH COEN
MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW
NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND
LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart De (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

21. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

23. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

24. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas incinerated in this unit during testing))}/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

25. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

28. If the NOX and/or CO concentrations, corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

29. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 1S, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

35. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

38. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

39. Formerly S-1511-149
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-788-11

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE VAPOR PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (#401B) (LOST HILLS): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and emission sulfur limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rule 2520, 9.4.2, 4301, 5.2.1 and 4801.3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, and 4351] Federally Enforceable Through Title V Permit

21. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

23. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {((7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

24. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

25. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

28. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emission concentrations, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

29. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial operation under this ATC. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 4320] Federally Enforceable Through Title V Permit

33. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

36. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

39. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

40. Formerly S-1511-149
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-789-11

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS:
PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION:
HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (#401C) (LOST HILLS): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
8-1547-789-11 Sep 7 2011 2:01PM - GOUGHDT: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any uncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

14. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

21. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

23. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

24. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

25. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

26. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

29. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

37. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

38. NOTE: There are no sulfur compounds daily emission limits (DELS) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

39. Formerly S-1511-150
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-790-11
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH A
COEN ULN BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPORECOVERY
SYSTEM S-1547-714. (#401D) (LOST HILLS): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA
LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT
GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO
12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-790-11 Sep 7 2011 2:01PM - GOUCHO: Joint Inspection NOT Required

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5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

22. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

23. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

24. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

25. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

28. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

29. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

32. Source testing to demonstrate compliance with NOx and CO emission limits shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

33. If permittee fails any compliance demonstration for NOx and/or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

39. NOTE: There are no sulfur compounds daily emission limits (DELS) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

40. Formerly S-1511-151
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-791-11 ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULN BURNER, A FLUE GAS RECIRCULATION (FGR) SYSTEM, AND A NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (#401E) (LOST HILLS): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-714 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

22. VOC emission rates shall not exceed 0.003 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

23. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

24. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

25. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

26. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

27. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

29. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

37. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

39. NOTE: There are no sulfur compounds daily emission limits (DELS) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

40. Formerly S-1511-152
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-792-11
EXPIRATION DATE: 05/31/2007

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (#401F) (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

3. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

4. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

5. Unit shall be equipped with natural gas and vapor recovery gas volume flowmeters. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing systems S-1547-714 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Maximum vapor recovery gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit
10. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods: 
   H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. 
   [District Rule 4320] Federally Enforceable Through Title V Permit

11. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

12. When fired exclusively on natural gas emission rates shall not exceed the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

14. When natural gas and vapor recovery gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = \{(7.2 lb/day)+(17.1 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

15. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

16. Compliance with natural gas SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

18. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

19. If the NOX and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

20. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

23. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15-days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

28. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-714.

29. Formerly S-1511-153

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

2. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

3. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit
9. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

12. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

13. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

14. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rule 4305, 6.3.2] Federally Enforceable Through Title V Permit

15. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

16. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Maximum TEOR gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

20. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods:
H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945.
[District Rule 4320] Federally Enforceable Through Title V Permit

22. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

23. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Emissions from this unit shall not exceed any of the following limits: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu or CO: 6 ppmv @ 3% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

25. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

31. Permittee shall perform District-witnessed or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit
32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

38. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

39. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District NSR Rule]

40. Note: Formerly S-1511-154
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-794-11

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER,
FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE
PIPING FROM VAPOR CONTROL SYSTEM S-1547-714 (401H) (LOST HILLS 2 LEASE): REPLACE EXISTING BURNER
WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX
ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING
BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% 02 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum TEOR gas flowrate for this unit shall not exceed 610,800 cubic feet per day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

21. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day) + (17.1 lb/day) x (fraction of total TEOR gas incinerated in this unit during testing) / (24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

23. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

24. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

25. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall perform District-witnessed or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

36. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

38. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070, 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

41. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District NSR Rule]

42. Formerly S-1511-155
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-795-11
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 82.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH ONE COEN QLN-ULN LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (4011) (LOST HILLS 2 LEASE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-795-11; Sep 7 2011 2:08PM - GOUGHD; Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee’s request for approval of equivalent equipment shall include the make, model, manufacturer’s maximum rating, manufacturer’s guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit’s sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum TEOR gas flowrate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

22. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

23. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

24. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

25. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall perform District-witnessed or -approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

36. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

37. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

39. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

41. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and NSR] Federally Enforceable Through Title V Permit

42. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
44. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District NSR Rule] Federally Enforceable Through Title V Permit

45. Formerly S-1511-156
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-796-11
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH ONE COEN QLN-ULN LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (401J) (LOST HILLS 2 LEASE): REPLACEEXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]
4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

S-1547-796-11 Sep 7 2011 2:01PM - DOUGHD : Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum TEOR gas flowrate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

22. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = (7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

23. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

24. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

25. Compliance with SOx emission rate shall be demonstrated by gas sulfur analysis and mass balance calculations annually within 60 days prior to permit anniversary. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall perform District-witnessed, or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
Conditions for S-1547-796-11 (continued)

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

33. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit

35. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. Permittee shall maintain records of daily quantity of natural gas/vapor recovery gas consumed and annual sulfur analyses of vapor recovery gas burned in this steam generator. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

38. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

39. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

40. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and NSR] Federally Enforceable Through Title V Permit

41. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District NSR Rule] Federally Enforceable Through Title V Permit

42. Formerly S-1511-157
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-797-10
EXPIRATION DATE: 05/31/2007

SECTION: SW14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL ULN BURNER AND WITH FLUE GAS RECIRCULATION (FGR) AND NON-CONDENSIBLE PIPING FROM VAPOUR CONTROL SYSTEM S-1547-819 (MOCO 603) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBTu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and TEOR well vent vapors from well vent vapor control system S-1547-819 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum heat input to steam generator shall not exceed 1,440 MMBTU/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Sulfur compound emissions (as SO2) and PM10 emissions from the combustion of well vent vapors from S-1547-819 in this steam generator and all other devices authorized to combust such vapors shall not exceed the limits established on S-1547-819. [District Rules 2201, 4201, 3.1 and 4301, 5.1, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15.0 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4305, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit
20. Emission rates shall not exceed any of the following: VOC: 7.2 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

22. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MBMtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
31. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Note: Formerly S-1511-166
PERMIT UNIT: S-1547-798-17
EXPIRATION DATE: 05/31/2007
SECTION: SW14 TOWNSHIP: 31S RANGE: 22E
EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (SHALE #2, NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 and 4306] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4407, and 4801] Federally Enforceable Through Title V Permit

20. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

30. Formerly S-1511-167
PERMIT UNIT: S-1547-799-16
SECTION: SW14  TOWNSHIP: 31S  RANGE: 22E
EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN ULN LOW NOX BURNER AND FLUE GAS
RECIRCULATION (FGR) SYSTEM (SHALE #3, NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/scf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: VOC: 7.5 lb/day, NOx (as NO2): 51 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

21. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Periodic monitoring of NOx, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Periodic monitoring of NOx, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Formerly S-1511-168
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-800-17
EXPIRATION DATE: 05/31/2007

SECTION: SW14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN ULN LOW NOX BURNER AND FLUE GAS RECYCLING (FGR) SYSTEM [SHALE #4, NORTH MIDWAY]

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

6. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6B; or Method 8; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by GC-FPD/TCD performed in the laboratory and EPA Method 19 to calculated emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D 3246 or grab sample analysis by GC-FPD/TCD performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), and 4301 (Amended December 17, 1992. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu or CO: 40 ppmv @ 3% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
31. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

32. Formerly S-1511-169
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: VOC: 7.5 lb/day, NOx (as NO2): 51.0 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

22. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Formerly S-1511-171

36. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

46. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
47. Field gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

49. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, % 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

50. Visible emissions shall not exceed s Ringelmann or 10% opacity. ['PSD SJ 89-02] Federally Enforceable Through Title V Permit

51. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

52. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

53. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

54. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-802-15  
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW11  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/TEOR GAS FIRED STEAM GENERATOR (11-1G, BELRIDGE) 
WITH FLUE GAS RECIRCULATION AND COEN QLN-ULN 3.2 LOW-NOX BURNER: REPLACE EXISTING BURNER 
WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX 
ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING 
BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable 
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application 
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. 
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if 
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved 
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination 
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized 
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
20. Emission rates shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu or CO: 1.9 ppmv @ 3% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

21. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

22. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

28. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement). [District Rules 4305, 6.3.2] Federally Enforceable Through Title V Permit

29. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input, make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. If compliance with the NOx emission limit is demonstrated through the fuel nitrogen content testing and compliance has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be bi-annually. If a bi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with an operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

19. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

31. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. [District Rules 2520, 9.4.2 and 4305, 6.3.2] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

34. Emissions from this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (12/16/93), of three 30-minute test runs for NOx and CO. [District Rules 2520, 9.4.2 and 4305, 6.3] Federally Enforceable Through Title V Permit

35. Formerly S-1511-172
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-803-17

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

ISSUANCE DATE: 06/19/2011

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

SECTION: NE03  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (BELRIDGE #3-20): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-803-12 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-803-17  Sep 21 2011 9:15AM - GoughD : Joint Inspection NOT Required

Southern Regional Office  •  34946 Flyover Court  •  Bakersfield, CA 93308  •  (661) 392-5500  •  Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

8. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201]

10. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

12. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

14. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permitee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

15. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320 and Kern County Rule 424]

16. Except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing)))/(24 hr/day). [District NSR Rule, 2520, 4201, and 4301] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4301, 4305, 4306, 4320, 4405 and Kern County Rule 425]

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 46.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day [District NSR Rule, 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

33. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070] Federally Enforceable Through Title V Permit

34. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

35. Formerly S-1511-181
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

4. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months, however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

10. This unit shall only be fired on natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Maximum heat input to steam generator shall not exceed 1,440 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates, including startup, shutdown, and refractory curing, shall not exceed any of the following: VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9,461 lb/year, CO: 43.2 lb/day, PM10: 7.2 lb/day, or SOx: 2.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of duration of each start-up and shutdown and refractory curing period. [District Rules 1070, 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-sample minute reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 9.4.2, 4305 and 4306] Federally Enforceable Through Title V Permit

30. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

33. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-185
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) burned and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

14. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 & 4306] Federally Enforceable Through Title V Permit

16. Only natural gas shall be used as fuel in this steam generator. [District Rule 2201; PSD SJ 89-02] Federally Enforceable Through Title V Permit

17. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Aera Energy shall notify the District of the approved burner to be installed and the alternative monitoring method selected prior to implementation of this ATC. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

31. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
32. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

33. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA Methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Field gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
46. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

49. Formerly S-1511-186

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108.1 (Kern)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules, 108.1 (Kern), 404 (Kern), and 407.2 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with an operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule; PSD SJ 89-02] Federally Enforceable Through Title V Permit

17. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. PM-10 and SO2 daily emission limits, when unit incinerates scrubbed non-condensible gas, shall be quantified on the mass balance basis on permit S-1547-822 for all steam generators authorized to incinerate scrubbed non-condensible gas. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit
23. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOX, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOX and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

28. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

33. Formerly S-1511-187

34. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, state and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
48. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

49. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

50. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. When designated as a dormant emission unit the fuel supply line shall be physically disconnected from this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

2. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

3. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

4. This steam generator is also approved to operate at SW/4 Sec. 01, T29S, R21E. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Unit shall be equipped with natural gas volume flowmeter and flue gas oxygen monitor/controller. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rules 4305 and 4305] Federally Enforceable Through Title V Permit

7. Permittee shall notify the District at least 48 hours prior to transfer between approved locations. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Upon recommencing operation, steam generator shall be fired with natural gas or field gas, with sulfur content (as H2S) not to exceed 15 ppmv. [District Rules 2201, 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

9. Upon recommencing operation, emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SO2 - 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

11. Upon recommencing operation, emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Upon recommencing operation, duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

13. Upon recommencing operation, duration of refractory curing shall not exceed 30 hours each per occurrence. Permitee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

15. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

16. Upon recommencing operation, when complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. Upon recommencing operation, when complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Upon recommencing operation, if the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

19. Upon recommencing operation, if fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

20. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

21. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

22. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

23. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
24. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Upon recommencing operation, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. Upon recommencing operation, if NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Upon recommencing operation, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Upon recommencing operation, all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Upon recommencing operation, source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 6.2, and 4306] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

37. Permittee shall maintain daily records of fuel type, annual fuel sulfur analyses and daily volumes of fuel gas fired in this steam generator. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

38. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

39. Note: Formerly S-1511-188 [District NSR Rule] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-808-13

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW11 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN, MODEL ULN, LOW NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM (#11-1H) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

7. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

8. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

11. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10 - 0.005 lb/MMBtu; SOx (as SO2) - 0.002 lb/MMBtu; VOC - 0.003 lb/MMBtu; NOx (as NO2) - 0.014 lb/MMBtu or 12 ppmv @ 3% O2; or CO - 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District NSR Rule and District Rules 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10 - 7.5 lb/day; SOx (as SO2) - 3.0 lb/day; VOC - 4.5 lb/day; NOx (as NO2) - 51.0 lb/day or 7665 lb/year; or CO - 45.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

15. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

17. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
18. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

32. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

34. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record all dates on which this unit is fired on any noncertified fuel and record the specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

35. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2520, 9.4.2, 4305, and 4306] Federally Enforceable Through Title V Permit

37. Note: Formerly S-1511-189
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-809-15  ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW01  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED C.E. NATCO STEAM GENERATOR, WITH A COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#1-1D) (BELRIDGE):
REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

20. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBTu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBTu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBTu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

33. Formerly S-1511-190
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM 10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit
30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

32. Formerly S-1511-191

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2, 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-811-8 Jun 28 2011 4:29PM – GOUGH
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

33. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
47. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

52. Formerly S-1511-193

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-812-10
EXPIRATION DATE: 05/31/2007
SECTION: SE35
TOWNSHIP: 12N
RANGE: 24W

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS (AND VAPOR RECOVERY GAS) FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN BURNER AND FLUE GAS RECIRCULATION (MOCO #807) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081 and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 407.2 (Kern), and 408 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following limits:
   PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule and District Rules 4201, 4301, 4305, 5.1; 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.3.1 and 4306, 5.3.1] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

29. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081; 4305, 6.2; and 4306, 6.2] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit
32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

33. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. Visible emissions shall not exceed a Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
48. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCOTeor project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

52. Formerly S-1511-194
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-825-11
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION:
HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW19 TOWNSHIP: 26S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE VAPOR PIPING FROM VAPOR CONTROL SYSTEM S-1547-714 (401L) (LOST HILLS 2 LEASE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

13. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Maximum TEOR gas flowrate for this unit shall not exceed 610,800 cubic feet per day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Total mass flowrate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

18. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rule 4320] Federally Enforceable Through Title V Permit

20. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

21. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

22. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1, 4201, 4301, 5.2, 4305, 5.1, and 4306, 5.1] Federally Enforceable Through Title V Permit

23. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

24. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

25. Compliance with SOx emission rate for non-TEOR gas shall be demonstrated annually by gas sulfur analysis and mass balance calculations. [District NSR Rule] Federally Enforceable Through Title V Permit

26. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

27. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

37. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx and CO emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.) [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

38. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

39. All units in a group for which representative units are source tested for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. All units in a group for which representative units are source tested for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches at any time to an alternate fuel type then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 2520, 9.3.2, 4305, 6.3.2, and 4306, 6.3.2] Federally Enforceable Through Title V Permit

41. Permittee shall maintain accurate records of annual sulfur analyses of and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

43. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule, District Rules 1070, 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

44. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District NSR Rule]

45. Formerly S-1511-235
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grain/dscf, calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

5. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Only natural gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

19. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

20. Emission rates shall not exceed any of the following: VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

21. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

22. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit
23. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
32. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

33. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

34. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Formerly S-1511-238
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080 and 4306] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

18. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

19. Permittee shall maintain daily records of quantity and higher heating value of natural gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 and EPA Method 19, fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

28. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

31. Formerly S-1511-239

32. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
33. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Field gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

46. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
48. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

49. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2300, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

17. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

18. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

23. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

25. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

26. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

29. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

32. Formerly S-1511-240
33. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

44. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
49. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

50. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-829-13

EXPIRATION DATE: 05/31/2007

SECTION: SE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER,
FLUE GAS RECIRCULATION (FGR) AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM (FINLEY
#13, NORTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last
Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of
quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount
and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type
of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel
testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly
testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally
Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

7. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements
of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended
December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these
requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Annual heat input to steam generator shall not exceed 525.6 billion Btu hhv. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.003 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

17. Emission rates, except during refractory curing, shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

18. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. If either the NO\textsubscript{x} or CO concentrations corrected to 3% O\textsubscript{2}, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

21. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The permittee shall maintain records of: (1) the date and time of NO\textsubscript{x}, CO, and O\textsubscript{2} measurements, (2) the O\textsubscript{2} concentration in percent and the measured NO\textsubscript{x} and CO concentrations corrected to 3% O\textsubscript{2}, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements for NO\textsubscript{x} and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NO\textsubscript{x} and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, and 4306] Federally Enforceable Through Title V Permit

26. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NO\textsubscript{x} and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 9.5.2, 4305, and 4306] Federally Enforceable Through Title V Permit

32. Formerly S-1511-241

33. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

34. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

35. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

36. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

37. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

38. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

39. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4, 7E and 20, PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

40. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

41. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Only natural gas may be fired by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit
44. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

45. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

49. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

50. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

14. Unit shall be equipped with natural gas and TEOR non-condensible gas volume flow meters and flue gas oxygen monitor/controller. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit

16. Only natural gas or a combination of natural gas and scrubbed non-condensible gas shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Maximum TEOR gas flow rate for this unit shall not exceed 610.8 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Total mass flow rate of sulfur compounds in casing gas entering District approved steam generators connected to sulfur scrubbing systems of S-1547-714 shall not exceed 103.4 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

19. When fired exclusively on natural gas, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, and 4351] Federally Enforceable Through Title V Permit

21. When natural gas and TEOR gas fired, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = ((7.2 lb/day)+(17.1 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing))/(24 hr/day). [District NSR Rule] Federally Enforceable Through Title V Permit

22. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

23. Compliance with SOx emission rate for non-TEOR gas shall be demonstrated annually by gas sulfur analysis and mass balance calculations. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Permittee shall perform District-witnessed, or approved fuel gas sulfur analysis of non-TEOR gas combusted in the unit on an annual basis. [District NSR Rule] Federally Enforceable Through Title V Permit
25. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 2520] Federally Enforceable Through Title V Permit

26. If the NOx and/or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure NOx and CO emissions shall be conducted not less than once every 12 months, except as provided below. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. Source testing to measure NOx and CO emissions shall be conducted not less than once every 36 months if compliance is demonstrated on two consecutive annual tests. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. If permittee fails any compliance demonstration for NOx or CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

32. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

35. Permittee shall maintain accurate records of annual sulfur analyses of and daily consumption of natural gas/TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and NSR] Federally Enforceable Through Title V Permit

36. Permittee shall perform daily sulfur mass balance calculations from records required on vapor control system S-1547-714, and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and NSR] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-830-6 Jun 20 2011 4:00PM - COUSHD
37. There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas; sulfur compounds emissions are limited by DELs on permit S-1547-714. [District NSR Rule] Federally Enforceable Through Title V Permit

38. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

39. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 2201, 2520, 4305, and 4306] Federally Enforceable Through Title V Permit

40. Formerly S-1511-244
PERMIT UNIT REQUIREMENTS

1. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District NSR Rule] Federally Enforceable Through Title V Permit

3. When the vapor gas stream is stopped or before starting, the unit may be disconnected or reconnected at the scrubbed vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed or reconnected. Permittee shall keep a written record of the date(s) when the unit is disconnected or reconnected at the scrubbed vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed or reconnected. [District Rule 1080] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

19. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

20. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit
22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer’s specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

34. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
46. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Visible emissions shall not exceed a Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

52. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

53. Formerly S-1511-246
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-832-20

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NE03 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF DORMANT 62.5 MMBTU/HR C. E. NATCO GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER. (#3-2C, BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]

3. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rules 4305, 4306, and 4320]

4. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rules 4305, 4306, and 4320]

5. A source test to demonstrate compliance with the NOx and CO emission limits shall be performed within 60 days of recommencing operation of the dormant emissions unit. [District Rules 4305, 4306, and 4320]

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081(Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-832-20; Sep 18 2011 11:16AM - OGD/CRD: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2520, 9.4.2 and 4320]

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

16. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Steam generator shall be equipped with an operational fuel gas volumetric flow meter and flue gas oxygen monitor/controller. [District Rules 2201 and 4320]

18. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District Rules 2201 and 4320]

19. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District Rule 2201] Federally Enforceable Through Title V Permit

20. Steam generator shall be equipped with a programmable logic controller (PLC). [District Rule 4305] Federally Enforceable Through Title V Permit
21. Only natural gas or a combination of natural gas and scrubbed non-condensible vapors shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Gas combusted in this steam generator shall not exceed 1,440 MMBtu/day. [District Rule 2201] Federally Enforceable Through Title V Permit

23. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320]

24. Emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

25. Emission rates, except during startup, shutdown, and refractory curing shall not exceed the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 425]

26. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

27. Emission rates shall not exceed any of the following: PM10: 7.2 lb/day, SOx (as SO2): 2.9 lb/day, VOC: 4.3 lb/day, NOx (as NO2): 49.0 lb/day or 9461 lb/year, or CO: 43.2 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

28. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

29. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

30. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]
32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

33. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 5.5.2, 4306, 5.5.2, and 4320, 5.8.2]

34. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 4320]

35. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

36. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

37. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, 4305, 6.2, 4306, and 4320]

39. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

40. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas and TEOR waste gas, and such records shall be made readily available for District inspection upon request for a period of five years. [District NSR Rule, District Rule 1070] Federally Enforceable Through Title V Permit

41. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

42. Formerly S-1511-247
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-833-18
ISSUANCE DATE: 07/26/2010

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR C. E. NATCO GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LO-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER (#2-5F) (BELRIDGE): DESIGNATE AS A RULE 4306 COMPLIANT DORMANT EMISSIONS UNIT

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520]

2. No modification to this unit shall be performed without an Authority to Construct (ATC) for such modifications, except for changes specified in the conditions below. [District Rule 2201]

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306]

4. Operator shall notify the District at least seven (7) calendar days prior to recommencing operation of this dormant emissions unit. [District Rule 4306]

5. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing or monitoring requirements otherwise required by this permit. [District Rule 4306]

6. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4306]

7. This unit may not be operated after the applicable compliance schedule from Rule 4320, unless a valid ATC is implemented that approves the changes allowing this unit to comply with the applicable requirements of Rule 4320. [District Rule 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. THIS IS NOT A PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-833-18  Sep 7 2011 2:29PM - GOUGH: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
8. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081]

9. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2]

10. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2]

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2]

12. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2]

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2; 4305, 6.2.1, and 4351, 6.2.1]

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2; 4305, 6.2.1; and 4351, 6.2.1]

15. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2]

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2]

18. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2]

19. Steam generator shall be equipped with operational fuel gas and vapor recovery gas volumetric flow meters. [District NSR Rule]

20. Annual heat input to steam generator shall not exceed 525.6 billion BTU hhv. [District NSR Rule]

21. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule]

22. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM-10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District NSR Rule, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425]

CONDITIONS CONTINUE ON NEXT PAGE
23. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425]

24. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 51.0 lb/day or 9461 lb/year, or CO: 45.0 lb/day [District NSR Rule]

25. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306]

26. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080]

27. Permittee shall maintain records of duration of each start-up shutdown and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306]

28. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306]

29. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306]

30. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306]

31. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306]

32. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306]

33. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR system in the closed position has occurred within the previous 12 months. [District Rule 1070]

34. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule]

CONDITIONS CONTINUE ON NEXT PAGE
35. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.3.2]

36. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the, applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306]

37. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306]

38. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

39. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2]

40. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306]

41. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306]

42. Formerly S-1511-248
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-834-16  ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
                  BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA

SECTION: SE02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A
COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL
SYSTEM S-1547-359, (#2-3I) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE
4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-834-13 shall be implemented prior to or concurrently with this ATC. [District
   Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
   of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time
   for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Seyed Sadredin, Executive Director / APCO

S-1547-834-16 - Sep 16 2011 11:48AM - GOUGHG - Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1]

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of higher heating value and daily quantity of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PVC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total vapor recovery gas gas incinerated in this unit during testing))/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425] 

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit 

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 51.8 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit 

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320] 

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 4306, and 4320; 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] 

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306; and 4320, 5.7.1] 

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320] 

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306, and 4320; 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] 

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

37. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

38. Formerly S-1511-249
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-835-18
ISSUANCE DATE: 06/19/2011

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE KERN COUNTY, CA

SECTION: SE02 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECYCLING AND NON-CONDENSABLE PIPING FROM VAPOUR CONTROL SYSTEM S-1547-359, (#2-3J) (BELRIDGE): LIMIT FUEL GAS SULFUR CONTENT TO 5 GR-S/100 DSCF FOR RULE 4320 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-835-15 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-835-18  Sep 16 2011 11:45AM – DAVIDW: Joint Inspection NOT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 2520, 9.4.2 and 4320]

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Maximum vapor recovery gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall maintain records of higher heating value and daily quantity of natural gas burned in this steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. The total fuel burned in this unit shall be less than 50% by volume PUC quality natural gas determined on a calendar month basis. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually. [District Rule 4320]

15. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, the following test methods (or other approved methods listed in this permit) shall be used; H2S: ASTM D6228 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory; total sulfur: ASTM 1072, D3246, D4084 or D6228; and methane content: ASTM D1945. [District Rules 2520, 9.3.2 and 4320]

16. The PUC quality/produced natural gas line and CVR/waste gas line shall each be equipped with a volumetric fuel meter. Permittee shall maintain monthly records of the percentage by volume of PUC quality natural gas burned in the unit. [District Rules 2201 and 4320]

17. Sulfur content of all fuel gas sources combined shall not exceed 5 gr-S/100 dscf. [District Rule 4320]

18. When fired exclusively on natural gas emission rates shall not exceed either of the following: PM10: 0.005 lb/MBtu or SOx (as SO2): 0.002 lb/MBtu. [District Rules 2201, 2520, 4201, 4301, 4320, 4406, 4801, and Kern County Rule 424]

19. When natural gas and vapor recovery gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: $PM10 = \left(\frac{(7.0 \text{ lb/day})+(249.2 \text{ lb/day}) \times (\text{fraction of total vapor recovery gas incinerated in this unit during testing})}{24 \text{ hr/day}}\right)$. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit
20. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4301, 4305, 4306, 4320, 4405, and Kern County Rule 425]

21. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

22. Emission rates shall not exceed any of the following: PM10: 240.0 lb/day, VOC: 4.4 lb/day, NOx (as NO2): 49.9 lb/day or 7495 lb/year, or CO: 44.0 lb/day. [District Rules 2201 and 4301, 5.2.1 and 5.2.3] Federally Enforceable Through Title V Permit

23. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306, and 4320]

24. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

25. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

26. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306, and 4320]

27. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1]

28. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
29. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

30. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4320]

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306, and 4320]

32. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]

33. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

35. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]

36. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

37. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of vapor recovery gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

38. Formerly S-1511-250
AUTHORITY TO CONSTRUCT


LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
      BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
      KERN COUNTY, CA

SECTION: SW01  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A
COEN QLN-ULN 3.2 LOW-NOX BURNER, WITH FLUE GAS RECIRCULATION (FGR) AND NON-CONDENSABLE
PIPING FROM VAPOR CONTROL SYSTEM, (#1-1E) (BELRIDGE); REPLACE EXISTING BURNER WITH COEN MODEL
QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX
BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND
LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
   to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
   applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
   by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
   that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
   equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all
laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters. [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. When TEOR gas is connected to this unit, steam generator shall be equipped with an operational volumetric TEOR gas flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall notify the District, in writing, at least 15 days prior to burning TEOR gas and when discontinuing the burning of TEOR gas. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

19. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
20. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as SO2): 0.002 lb/MMBtu. [District NSR Rule, Rules 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

21. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = \{(7.0 \text{ lb/day})+(249.2 \text{ lb/day}) \times (\text{fraction of total TEOR gas incinerated in this unit during testing})/(24 \text{ hr/day})\}. [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

22. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

23. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District NSR Rule and Rules 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

24. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-width basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425 Federally Enforceable Through Title V Permit

25. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

26. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

37. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2; 4306, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

38. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit

39. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g., from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit

41. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

42. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

44. Sample collection for compliance demonstration (source testing) shall be by an ARB certified testing laboratory and shall be District witnessed or authorized. [District Rule 1081] Federally Enforceable Through Title V Permit

45. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

46. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas. [District NSR Rule, District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

47. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

48. Formerly S-1511-253
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-837-16
LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
                  BAKERSFIELD, CA 93389-1164
LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
          KERN COUNTY, CA
SECTION: NW11  TOWNSHIP: 29S  RANGE: 21E
EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A
COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOUR
CONTROL SYSTEM S-1547-359. (#11-1F) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN
ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR
ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT
TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Nitrogen oxide (NOx) emissions shall not exceed 140 lb/hr, calculated as NO2. [District Rules 4301, 5.2.2 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Particulate matter emissions shall not exceed 0.1 grain/dscf, 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rules 4201, 3.1 and 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit

9. Emissions from gaseous fired units shall not exceed 200 lb sulfur compounds/hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rules 4301, 5.2.1, and 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Sulfur emissions shall not exceed 0.11 lb of sulfur per million BTU of heat input, averaged over 3 - one hour periods. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; multiplying the reported sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by a combination of source testing for sulfur compounds and fuel analysis. Compliance may be demonstrated for this unit individually, or by showing that the total emissions of sulfur compounds from all steam generators located at the stationary source with ATC or PTO issued prior to September 12, 1979 does not exceed the emissions that would result if each unit was operating in compliance with the specified limit. [Kern County Rule 424 and District Rule 4406] Federally Enforceable Through Title V Permit

11. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

13. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

14. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Steam generator shall be equipped with operational vapor control system gas supply volumetric flow meter whenever unit is connected to the vapor control system gas supply. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Maximum TEOR gas flow rate for this unit shall not exceed 1,300 Mcf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
18. When fired exclusively on natural gas, except during startup, shutdown, and refractory curing, emissions from this unit shall not exceed either of the following limits: PM10: 0.005 lb/MMBtu or SOx (as S02): 0.002 lb/MMBtu. [District NSR Rule, Rules 2520, 4301, 4406, 4801 and Kern County Rule 424] Federally Enforceable Through Title V Permit

19. When natural gas and TEOR gas fired, except during startup, shutdown, and refractory curing, maximum PM10 emissions shall not exceed the lb/hr limit calculated as follows: PM10 = {(7.0 lb/day)+(249.2 lb/day)x(fraction of total TEOR gas incinerated in this unit during testing)}/(24 hr/day). [District Rules 2201, 2520, 4201 and 4301] Federally Enforceable Through Title V Permit

20. Steam generator shall be operated at no greater than 1,466.7 MMBtu hhv/day heat input. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

22. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

23. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40.0 ppmv @ 3% O2. [District NSR Rule and Rules 2520, 4301, 4305, 4306, 4405 and Kern County Rule 425] Federally Enforceable Through Title V Permit

24. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

25. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOx @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

26. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

27. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

28. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable concentrations, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable concentrations after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
29. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

30. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4 and 4306, 5.4] Federally Enforceable Through Title V Permit

31. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 6.3.1 and 4306, 6.3.1] Federally Enforceable Through Title V Permit

33. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

34. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

37. Annual test results submitted to the District from unit(s) representing a group of units may be used to measure NOx and CO emissions of this permit for that group, provided the selection of the representative unit(s) is approved by the APCO prior to testing. Should any of the representative units exceed the required NOx emission limits of this permit, each of the units in the group shall demonstrate compliance by emissions testing within 90 days of the failed test. (This requirement shall not supersede a more stringent NSR or PSD permit testing requirement.). [District Rule 4305, 6.3.2; 4306, 6.3.2 and 4351, 6.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
38. The following conditions must be met for representative unit(s) to be used to test for NOx and CO limits for a group of units: 1) all units are initially source tested and emissions from each unit in group are less than 90% of the permitted value and vary 25% or less from the average of all runs, 2) all units in group are similar in terms of rated heat input (rating not to exceed 100 MMBtu/hr), make and series, operation conditions, and control method, and 3) the group is owned by a single owner and located at a single stationary source. [District Rules 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit

39. All units in a group for which representative units are source for NOx and CO emissions shall have received the same maintenance and tune-up procedures as the representative unit(s). These tune-up procedures shall be completed according to District Rule 4304 (Adopted October 19, 1995) and tune-up test results shall show comparable results for each unit in the group. Records shall be maintained for the each unit of the group including all preventative and corrective maintenance work done. [District Rules 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit

40. All units in a group for which representative units are source tested to for NOx and CO emissions of this permit shall be fired on the same fuel type during the entire compliance period. If a unit switches for any time to an alternate fuel type (e.g. from natural gas to oil) then that unit shall not be considered part of the group and shall be required to undergo a source test for all fuel types used, within one year of the switch. [District Rules 4305, 6.3.2 and 4306, 6.3.2] Federally Enforceable Through Title V Permit

41. Only natural gas or a combination of natural gas and scrubbed non-condensible gas from sulfur scrubbing system(s) S-1547-359 shall be used as fuel in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

42. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District NSR Rule] Federally Enforceable Through Title V Permit

43. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rules 1070 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

44. Sample collection for compliance demonstration (source testing) shall be by an ARB certified testing laboratory and shall be District witnessed or authorized. [District Rule 1081] Federally Enforceable Through Title V Permit

45. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1 and 4306, 6.1] Federally Enforceable Through Title V Permit

46. Permittee shall maintain accurate records of heating values (in Btu/scf) and daily consumption of natural gas/TEOR waste gas. [District NSR Rule, District Rules 1070 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

47. NOTE: There are no sulfur compounds daily emission limits (DELs) expressed on this permit for incineration of TEOR gas, sulfur compounds emissions are limited by DELs on permit S-1547-359.

48. Formerly S-1511-253
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D3246, D 4084, or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 5.5.6 and 4306, 5.5.6] Federally Enforceable Through Title V Permit

12. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rules 2080; 4305, 6.1.5; and 4306, 6.1.4] Federally Enforceable Through Title V Permit

14. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1; 4201, 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit

18. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 5.0, 4405, 4406, and 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

19. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-885-15: Sep 7 2011 2:31PM - Gough
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2, and 4306, 5.4.2] Federally Enforceable Through Title V Permit

24. All source test emission measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4305 (amended August 21, 2003). [District Rules 4305, 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1 and 4306, 5.5.1] Federally Enforceable Through Title V Permit

27. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. Compliance demonstration (source testing) shall be by District witnessed, or authorized. Sample collection shall be by an ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

32. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule and District Rules 1070; 2520, 9.4.2; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit

33. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
34. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv.dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
49. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

52. Formerly S-1511-379

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit and sulfur emission limits has been demonstrated for 8 consecutive weeks for a fuel source, then the fuel testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3031, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; 4305, 6.2.1; and 4306, 6.2.1] Federally Enforceable Through Title V Permit
8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108.1 (Kern), 404 (Kern), 407.2 (Kern), and 408 (Kern). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4306] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up, shutdown and refractory curing, per a period of five years and make such records readily available for District inspection upon request. [District Rule 2080 & 4306] Federally Enforceable Through Title V Permit

15. Steam generator shall be equipped with operational fuel gas volumetric flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Steam generator shall be equipped with operational vapor recovery gas volumetric flow meter whenever unit is connected to the vapor recovery gas supply. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Unit may be disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter removed (or replaced). Permittee shall keep a written record of the date(s) when the unit is disconnected (or reconnected) at the vapor recovery gas supply and the vapor recovery gas volumetric flow meter is removed (or replaced). [District Rule 1080] Federally Enforceable Through Title V Permit

18. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following limits: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 50 ppmv @ 3% O2. [District NSR Rule and District Rules 2520, 9.1; 4201, 4301, 5.2; 4305, 5.1; and 4306, 5.1] Federally Enforceable Through Title V Permit

19. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, and 4801] Federally Enforceable Through Title V Permit

20. Permittee shall maintain daily records of quantity and higher heating value of natural gas and vapor recovery gas burned in this steam generator. [District NSR Rule] Federally Enforceable Through Title V Permit

21. The permittee shall monitor and record the stack concentration of NOX, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305, 5.4.2, and 4306, 5.4.2] Federally Enforceable Through Title V Permit
22. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 5.4.2, and 4306, 5.4.2] Federally Enforceable Through Title V Permit

24. During the 36-month source testing interval the operator shall tune the unit at least twice per calendar year, (from four to eight months apart) by a qualified technician in accordance with the procedure described in Rule 4304, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer. Semi-annual tuning is not required if emissions are monitored monthly with a portable analyzer. [District Rule 4306, 6.3.1] Federally Enforceable Through Title V Permit

25. All emissions measurements for NOx and CO shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305. 5.5.2 and 4306, 5.5.2] Federally Enforceable Through Title V Permit

26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District NSR Rule and District Rules 4305, 6.3 and 4306, 6.3] Federally Enforceable Through Title V Permit

27. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - EPA Method 6 or 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D4084 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, and 4306] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 5.5.5, and 4306, 5.5.5] Federally Enforceable Through Title V Permit

31. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District NSR Rule and District Rules 1070; 2520; 4305, 6.1; and 4306, 6.1] Federally Enforceable Through Title V Permit
32. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr), and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Field or casing head gas will be sweetened as required to limit the sulfur content of the fuel to 75 gr/scf. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

46. Visible emissions shall not exceed « Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
47. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

50. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

51. Formerly S-1511-380

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

Steam generator shall be equipped with operational natural gas volumetric flow meters. [District NSR Rule] Federally Enforceable Through Title V Permit

Natural gas fuel sulfur content shall not exceed 0.75 gr S/100 scf. [District NSR Rule; PSD SJ 89-01] Federally Enforceable Through Title V Permit

Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 3.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 4.5 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the permissible emissions concentration, the permittee shall correct the emissions to the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the permissible emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081, and 4305, 6.2] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
31. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

32. The Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable emissions limit stated in the conditions below. In addition, the Regional Administrator shall be notified in writing within 15 days of any such failure. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

33. This notification shall include a description of the malfunctioning equipment or abnormal operation, the date of initial failure, the period of time over which emissions were increased due to the failure, the cause of the failure, the estimated resultant emissions in excess of those allowed under the conditions below, and the methods utilized to restore normal operations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

34. Facility shall operate this unit in compliance with all other applicable provisions of 40 CFR Parts 52, 60 and 61 and all other applicable federal, State and local air quality regulations. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

35. This unit shall be equipped with oxygen controls, low NOx burner, and a flue gas recirculation system for the control of NOx emissions. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

36. Facility shall conduct annual performance tests for NOx and PM10 and furnish the EPA a written report of the results of such tests. The tests shall be conducted at the maximum operating capacity of the unit. Upon written request from the operator, EPA may approve the conducting of performance tests at a lower specified operating capacity. Upon written request and adequate justification, EPA may waive annual testing requirements for this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

37. Performance tests for NOx and PM10 shall be conducted and the results reported in accordance with the test methods in 40 CFR 60, Part 60.8 and Appendix A. The following test methods shall be used: NOx - EPA methods 1 through 4 (lb/hr) and 7E (ppmv), PM10 - EPA Methods 1 through 5. Equivalent test methods may be used with prior written approval from the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

38. EPA shall be notified in writing at least 30 days prior to performance tests. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

39. For performance test purposes, sampling ports, platforms, and access shall be provided by the operator at each exhaust system in accordance with 40 CFR 60.8(e). [PSD SJ 89-01] Federally Enforceable Through Title V Permit

40. Operations during periods of startup, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

41. Only natural gas or a combination of natural gas and field or casing head gas may be fired by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

42. Operator shall record hours of operation and amounts and types of fuel fired each calendar quarter. All information shall be recorded in a form suitable for inspection. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

43. Emission rates shall not exceed any of the following: PM10: 0.303 lb/hr, NOx: 2.71 lb/hr or 35 ppmv dry, @ 3% O2. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

44. Visible emissions shall not exceed a Ringelmann or 10% opacity. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

45. Any relaxation in the District's Determination of Compliance conditions, Authority to Construct conditions, Permit to Operate conditions, or any other subsequent permit of legally binding document that could result in an increase of the potential to emit of any pollutant from this source above the PSD applicability thresholds will require a full PSD review of the source as if construction had not yet begun. [PSD SJ 89-01] Federally Enforceable Through Title V Permit
46. Facility shall have legal and operational responsibility and control of all air pollutant emitting activities of the MOCO TEOR project. This responsibility shall include, but not limited to: operating and maintaining the project to comply with all federal, state and local air pollution laws, regulations, permits, orders and other requirements; ensuring the emissions offsets or other reductions required for this project under permits issued by the District are obtained as required; any violation of any air pollution requirements are the legal responsibility of the facility in addition to any other legally responsible parties. Any proposed change to this condition shall require the prior written concurrence of the EPA. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

47. Facility is required to implement the conditions required by the U.S. Fish and Wildlife Service, as outlined in their Biological Opinion and Formal Consultation Response (August 30, 1990), to prevent the incidental taking (killing, harming or harassment) of endangered species that may be affected by this unit. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

48. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-01] Federally Enforceable Through Title V Permit

49. NOTE: Formerly S-1511-378
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1034-12

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW11  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A FLUE GAS
RECIRCULATION (#11-11) (BELRIDGE) WITH A COEN MODEL QLN-ULN LOW NOX BURNER: REPLACE EXISTING
BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME
LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE
EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if
applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved
by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination
that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized
equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

8. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

14. Natural gas fuel sulfur content shall not exceed 0.47 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

16. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

17. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.0013 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv at 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv at 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

18. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
19. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 2.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

20. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission rate shall not exceed 30 ppmvd @ 3% O2 or 0.036 lb/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4306 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation and shall make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

21. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

22. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. If the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
28. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

30. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

31. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

32. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

34. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

35. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1035-13
ISSUANCE DATE: 06/11/2009

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW11 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND FLUE GAS RECYCLING (#11-1J) (BELRIDGE): REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR EQUIVALENT; OR TUNE EXISTING BURNER; AND LOWER NOX LIMIT TO 12 PPM @ 3% O2 FOR RULE 4320 COMPLIANCE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2520] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. The permittee shall notify the District of the compliance method chosen (replacement burner or tuning) and if applicable, the approved burner to be installed prior to implementation of this ATC. [District Rule 2201]

4. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this ATC. Approval of the equivalent equipment shall be made in writing and only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the authorized equipment [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-1035-13; Jun 32 2011 12:06PM - GDUG4D; Join Inspection N/DT Required

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emissions rates, equipment drawing(s) and operational characteristics/parameters [District Rule 2010]

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of 40 CFR 60, Subpart Dc (except 60.44c(g) and (h) and 60.48c). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Natural gas fuel sulfur content shall not exceed 0.47 gr S/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Fuel burned in this unit shall not be PUC quality natural gas. PUC quality natural gas is any gaseous fuel where the sulfur content is no more than one-fourth (0.25) grain of hydrogen sulfide per one hundred (100) standard cubic feet, no more than five (5) grains of total sulfur per one hundred (100) standard cubic feet, and at least 80% methane by volume. [District Rule 4320] Federally Enforceable Through Title V Permit

14. Fuel H2S, total sulfur, and methane content shall be determined semi-annually using the following test methods H2S: ASTM D6228; total sulfur: ASTM D1072; ASTM D3246, or ASTM D6228; and methane content: ASTM D1945. [District Rule 4320] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.0013 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.014 lb/MMBtu or 12 ppmv @ 3% O2, or CO: 0.03 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.1 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 7.5 lb/day, SOx (as SO2): 2.0 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 7665 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
8. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

19. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320]

20. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

21. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. Compliance with fuel sulfur limit(s) can be demonstrated either by monitoring sulfur content at location(s) after all fuel sources are combined prior to incineration, or by monitoring the sulfur content and volume of each fuel source and performing mass balance calculations. Records of monitoring locations, detected sulfur concentrations, and mass balance calculations, if necessary, shall be maintained and kept onsite and made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
26. For each steam generator site downstream of H2S scavenger chemical injection points, permittee shall monitor sulfur content of the gas prior to incineration in affected steam generators on a daily basis utilizing Draeger tubes calibrated for existing sulfur species or other District-approved fuel sulfur detection method(s) or device(s). If compliance with fuel sulfur content limit(s) for the affected steam generators is demonstrated for 5 consecutive days, then the monitoring frequency shall be weekly. [District Rule 2201] Federally Enforceable Through Title V Permit

27. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

29. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

30. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320]

32. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301]

7. All combustion equipment (burner, combustion air controls, etc.) shall be operated and maintained as intended by manufacturer. [District Rule 2080]

8. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2080]

9. When gas firing, compliance source testing for fuel gas sulfur content shall be conducted annually (or as approved by the District) within 60 days prior to the permit anniversary. [District Rule 1070]

10. The sample collection shall be conducted under conditions (fuel quality, firing rate, waste gas incineration, air fuel ratio, etc.) expected to result in emissions representative of normal operation. [District Rule 1081]

11. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080]

12. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]

13. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]

15. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District quarterly, if no SLC violations occurred in the previous six months. [District NSR Rule]

16. Total daily emissions of each air contaminant, and total daily fuel used, for each unit subject to the SLC and for each day of the month, shall be submitted to the District monthly, if SLC violations occurred in the previous six months. [District NSR Rule]

17. Reports of daily emissions and fuel usage, as required by this permit for units in the SLC, shall be submitted within 30 days after the end of the reporting period. [District NSR Rule]

18. The operator shall apply to revise each Permit to Operate subject to the SLC when any unit subject to the SLC has a District-authorized change in daily emission rate, or Permit to Operate is surrendered or sold. [District NSR Rule]

19. Emissions assessed to the SLC for this unit are PM10: 9.6 lb/day, SOx (as SO2): 1.1 lb/day, NOx (as NO2): 54.0 lb/day, VOC: 2.9 lb/day, and CO: 6.7 lb/day [District Rule 2201]

20. Emission rates shall not exceed PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @3%O2, VOC: 0.003 lb/MMBtu, and CO: 0.007 lb/MMBtu. [District Rule 2201]

21. Emission rates from all permit units in the Western Heavy Oil Source SLC Compliance Plan shall not exceed PM10: 545.6 lb/day, SOx (as SO2): 6,237.6 lb/day, NOx (as NO2): 1,708.6 lb/day, VOC: 59.8 lb/day, and CO: 282.6 lb/day. [District Rule 2201]

22. This permit unit shall comply with NOx and sulfur compound emission requirements as specified in Rules 4405 and 4406. [District Rules 4405 and 4406]

23. For any day monitoring provisions fail, the emissions shall be calculated on operational data (steam production rate, inlet air and exhaust gas flowrates, etc) or, if such data is not available, for the four days of operation preceding the breakdown. [District Rule 2201]

24. The following test methods shall be used: fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans. [District Rule 1081]


These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-1074-5  
	EXPIRATION DATE: 05/31/2007

SECTION: NW30  
TOWNSHIP: 28S  
RANGE: 21E

EQUIPMENT DESCRIPTION:
DORMANT 62.5 MMBTU/HR CE NATCO NATURAL GAS/TEOR FIRED STEAM GENERATOR #15 WITH NORTH AMERICAN MODEL #6131 BURNER, O2 ANALYZER/CONTROLLER AND THERMOTICS SO2 SCRUBBER

PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.034 lb/MMBTU, SOx (as S): 0.034 lb/MMBTU, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.007 lb/MMBTU, or CO: 50 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

5. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

10. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The permittee shall keep daily records of the amount of gas combusted, and the date and duration of scrubber operation, for a period of two years, and shall make records available for inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

12. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. When utilizing scrubber, source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

18. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emissions from this unit shall not exceed any of the following limits: PM10: 0.034 lb/MMBTU, SOx (as S): 0.034 lb/MMBTU, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.007 lb/MMBTU, or CO: 50 ppmv @3% O2. [District Rule 4305] Federally Enforceable Through Title V Permit

5. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081] Federally Enforceable Through Title V Permit

10. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The permittee shall keep daily records of the amount of gas combusted, and the date and duration of scrubber operation, for a period of two years, and shall make records available for inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

12. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

13. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. When utilizing scrubber source testing to demonstrate compliance with SOx emission limit shall be conducted not less than once every 12 months. When not utilizing scrubber, fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

17. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

2. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305]

3. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 4 below. [District Rule 2201]

4. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080]

5. Emissions from this unit shall not exceed any of the following: PM10: 2.11 lb/hr, SOx (as S): 0.034 lb/MMBTU, VOC: 0.42 lb/hr, NOx (as NO2): 30 ppmv @3% O2; or CO: 50 ppmv @3% O2. [District Rule 4305]

6. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District NSR Rule]

7. The scrubber shall be equipped with a differential pressure gauge to indicate the pressure drop across the unit. The gauge shall be maintained in good working condition at all times. [District NSR Rule]

8. Scrubber liquid supply (at inlet to scrubber) shall have an operational pressure indicator. [District NSR Rule]

9. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule]

10. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District NSR Rule]

11. Scrubber stack shall be equipped with adequate provisions facilitating the collection of gas samples consistent with EPA test methods. [District Rule 1081]

12. Steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall have no detectible leaks. [District NSR Rule]

13. Unit is authorized to burn TEOR S-1547-1079 gas. [District Rule 2201]

14. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing has occurred within the previous 12 months. [District NSR Rule]

15. Testing for gas sulfur content shall be conducted no less than monthly. [District NSR Rule]

16. Compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months, except as provided below. [District Rule 4305]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
17. Compliance with NOx and CO emission limits shall be demonstrated not less than once every 36 months if compliance is demonstrated on two consecutive annual compliance tests. [District Rule 4305]

18. If permittee fails any compliance demonstration for NOx and CO emission limits when testing not less than once every 36 months, compliance with NOx and CO emission limits shall be demonstrated not less than once every 12 months. [District Rule 4305]

19. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

20. The permittee shall keep daily records of the amount of gas combusted, and the date and duration of scrubber operation, for a period of two years, and shall make records available for inspection upon request. [District Rule 1070]

21. This equipment shall not be operated for any reason until necessary retrofits are made so that the equipment is in full compliance with the applicable requirements of District Rule 4305. [District Rule 4305]

22. No modification to this unit shall be performed without an Authority to Construct permit for that modification, except for changes specified in Condition #3, below. [District Rule 2201]

23. All fuel supply lines shall be physically disconnected from this unit. [District Rule 4305]

24. Emissions from this unit shall not exceed any of the following: 30 ppmv NOx, corrected to 3% oxygen or 400 ppmv CO, corrected to 3% oxygen. [District Rule 4305]

25. A source test demonstrating compliance with the indicated emissions limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 1070]

26. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

27. Fuel oil preheat and atomization equipment shall be operated and maintained as intended by manufacturer. [District NSR Rule]

28. Excess combustion air shall be maintained at approximately 2.3% excess O2 by continuous operation of oxygen analyzer/controller. [District NSR Rule]

29. Fuel oil sulfur content shall not exceed 1.2% by weight. [District NSR Rule]

30. Scrubber liquor pH shall be maintained between 6.0 and 7.5 and shall be continuously monitored. [District NSR Rule]

31. Steam generator firebox, convection section, and all flue gas ductwork shall be free of visible leaks. [District NSR Rule]

32. Emission rates shall not exceed the following PM10: 4.56 lb/hr, SOx (as SO2): 3.82 lb/hr, VOC: 2.03 lb/hr, and SO4: 1.70 lb/hr. [District NSR Rule]

33. Note: Formerly S-1129-845.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This equipment shall not be operated for any reason until necessary retrofits are made to comply with the applicable requirements of District Rule 4305. [District Rule 4305] Federally Enforceable Through Title V Permit

2. No modification(s) to this unit shall be performed without an Authority to Construct for the modification(s), except for changes specified in condition 3 below. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The fuel supply line shall be physically disconnected from this unit. [District Rule 2080] Federally Enforceable Through Title V Permit

4. Emission rates shall not exceed any of the following limits: PM10: 0.010 lb/MMBTU, SOx (as SO2): 0.002 lb/MMBTU, NOx (as NO2): 30 ppmv @3% O2, VOC: 0.003 lb/MMBTU, or CO: 400 ppmv @3% O2. [District NSR Rule] Federally Enforceable Through Title V Permit

5. A source test to demonstrate compliance with the indicated emission limits shall be performed within 60 days of recommencing operation of this unit. [District Rule 4701] Federally Enforceable Through Title V Permit

6. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

7. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

8. This unit shall be fired exclusively on natural gas which may consist of one or a mixture of fuels including treated produced gas and purchased gas with a sulfur content not to exceed 0.70 gr/100 scf. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Fuel sulfur content shall be certified by a third party fuel supplier or compliance with sulfur compound emission limit shall be demonstrated not less than once every 12 months by fuel gas sulfur content analysis and higher heating value analysis of each fuel source. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Note: Formerly S-1129-847. [Note]

12. This permit unit shall not be operated unless owner or operator apply to modify Title V permit to address the requirements of District Rule 2520, section 9.0 for this permit unit. [District Rule 2520, 9.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1089-16

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS:
PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION:
HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 24 TOWNSHIP: 11N RANGE: 23W

EQUIPMENT DESCRIPTION:
MODIFICATION OF 62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL #QLN-ULN ULTRA LOW-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) (HSG-186): CONNECT TO SO2 SCRUBBER LISTED IN S-1135-26, AUTHORIZE VAPOR RECOVERY GAS FIRING, AND REVISE EMISSION LIMITS

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

3. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rules 2201, 2520 Section 9.3.2, and 4320] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

9. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. Emission rates, except during startup, shutdown, and refractory curing shall not exceed any of the following: PM10: 0.0264 lb/MMBtu, SOx (as SO2): 9 ppmv @3% O2, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, or CO: 0.030 lb/MMBtu or 40 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4320, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

11. Emission rates during refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan, NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 39.9 lb/day, SOx (as SO2): 23.3 lb/day, VOC: 4.5 lb/day, NOx (as NO2): 54.0 lb/day or 9855 lb/year, or CO: 45.0 lb/day [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

14. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

16. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
17. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. When steam generator exhaust is routed through scrubber, steam generator firebox convection section, scrubber bypass valve, and all flue gas ductwork shall be maintained with no detectable leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

21. When scrubber is bypassed, fuel gas sulfur content shall not exceed 5 grains of total sulfur per 100 dscf of fuel gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

22. When steam generator exhaust is routed through the scrubber, permittee shall monitor and record scrubber liquor recirculation rate and pH at least once per month. [District Rule 4320] Federally Enforceable Through Title V Permit

23. Source testing to demonstrate compliance with SOx emission limits (SOx emission concentration or control efficiency) in this permit shall be conducted annually. Source testing may be deferred if scrubber is bypassed as authorized by this permit. Whenever the unit is switched to scrubbed operation, compliance source testing for SOx shall be conducted within 60 days of initial scrubbing date unless source testing under scrubbed operation has occurred within the previous 12 months. Source testing of scrubber exhaust during operation of any one of the steam generators S-1135-26 or S-1547-1089 shall satisfy the testing requirement for this unit. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit

24. Source testing to demonstrate compliance with the PM10 emission limit (lb/MMBtu) included in this permit shall be conducted concurrently with the initial compliance test for SOx and every three years thereafter. Source testing of scrubber exhaust during operation of any one of the steam generators S-1135-26 or S-1547-1089 when firing the maximum available quantity of waste gas shall satisfy the PM10 testing requirement for this unit. [District Rule 2201]

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation but no longer than 2 hrs after re-ignition. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
26. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

29. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588, PM10 (lb/scf) - EPA Methods 5, 201A, and 202. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

30. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

31. This Authority to Construct may be implemented concurrently with any of the Rule 4320 NOx compliance option ATCs S-1547-1089-10, '-1089-11, '-1089-13, '-1089-14, and '-1089-15 for this unit issued within projects 1084298, 1084300, 1084302, 1084304, and 1084306. [District Rule 2201] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

33. Note: Formerly S-1129-848. [Note]

34. This ATC cancels and replaces ATC S-1547-1089-12. [District Rule 2201]
PERMIT UNIT REQUIREMENTS

1. No modification(s) to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in conditions below. [District Rule 2010] Federally Enforceable Through Title V Permit

2. The fuel supply line shall be physically disconnected from this unit. [District Rule 4306] Federally Enforceable Through Title V Permit

3. This equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4306 and all other applicable District regulations. [District Rule 4306] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and Kern County Rule 108.1] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. A source test to demonstrate compliance with the indicated emissions limits shall be performed within 60 days of recommencing operation of this unit. [District Rules 2201 and 4305]

7. Particulate matter emissions from any combustion source shall not exceed 0.1 grains/dscf (calculated to 12% carbon dioxide). [District Rule 4301]

8. All combustion equipment (burner, combustion air controls, etc.) shall be operated and maintained as intended by manufacturer. [District Rule 2080]

9. If continuous operation oxygen analyzer/controller is utilized, excess O2 shall be maintained between 0.5 and 3.0%. If not utilized, excess air shall be maintained at no less than 15%. [District Rule 2080]

10. When gas firing, compliance source testing for fuel gas sulfur content shall be conducted annually (or as approved by the District) within 60 days prior to the permit anniversary. [District Rule 1070]

11. The sample collection shall be conducted under conditions (fuel quality, firing rate, waste gas incineration, air fuel ratio, etc.) expected to result in emissions representative of normal operation. [District Rule 1081]

12. The operational conditions during compliance testing may be imposed as permit requirements. [District Rule 2080]

13. Should source testing indicate an emission factor higher than that approved, the operator shall comply with Rule 1100 and, if necessary, submit an application for Authority to Construct to incorporate the higher emission factor into the SLC. [District NSR Rule]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule]

15. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District NSR Rule]

16. Maximum emission rates for permit unit shall not exceed PM10: 0.010 lb/MMBtu, SOx (as SO2): 0.001 lb/MMBtu, NOx (as NO2): 0.018 lb/MMBtu or 15 ppmv @ 3% O2, VOC: 0.003 lb/MMBtu, and CO: 0.007 lb/MMBtu. [District Rule 2201]

17. This permit unit shall comply with NOx and sulfur compound emission requirements as specified in Rules 4405 and 4406. [District Rules 4405 and 4406]

18. For any day monitoring provisions fail, the emissions shall be calculated on operational data (steam production rate, inlet air and exhaust gas flowrates, etc) or, if such data is not available, for the four days of operation preceding the breakdown. [District Rule 2201]

19. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, CO (ppmv) - EPA Method 10 or ARB Method 100, and stack gas oxygen - EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4701]

20. Formerly S-1141-436-1

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-1098-6: Sep 7 2011 3:01PM - GOUGH5
PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing pursuant to conditions 18, 22, 23, 24 and 25 documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of startup and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or $840 lb/yr or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The operator shall demonstrate compliance with this unit's sulfur compound exhaust concentration limit(s) using one of the following: fire the unit only on PUC or FERC regulated natural gas, test the sulfur content of each fuel source, or determine that the concentration of sulfur compounds in the exhaust does not exceed the concentration limit by a combination of source testing and fuel analysis. [District Rules 2520, 9.4.2, 4301, 5.2.1 and Rule 4801, 3.1] Federally Enforceable Through Title V Permit

13. If FGR system on unit is not used or used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOX, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
18. If periodic monitoring of FGR rate and firing rate is selected, the acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise specified in the Permit to Operate no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

21. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

22. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months, (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months, (no more than 30 days before or after the required 36 months source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

23. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6, 6C or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - EPA Method 11 or 15, ASTM D3246 or double GC for H2S and mercaptans performed in a laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit

26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

28. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1143-1

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing pursuant to conditions 19, 23, 24, 25 and 26 documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or 5840 lb/yr, or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. During a "shakedown" period not to exceed 60 calendar days from initial operation of the modifications authorized by this ATC, NOx emission shall not exceed 15 ppmvd NOX @ 3% O2 or 0.018 lb-NOX/MMBtu. The shakedown period shall be concluded prior to the applicable Rule 4320 compliance deadline selected for this unit. Permittee shall maintain a record of the date of initial operation for at least 5 years. [District Rule 4320] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

14. If FGR system on unit is not used or used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOx, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. If periodic monitoring of FGR rate and firing rate is selected, the acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

20. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4303 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1144-1

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing pursuant to conditions 17, 21, 22, 23 and 24 documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown (as defined in Rule 4320) shall not exceed 2 hours each per occurrence. Refractory curing period is defined as a maintenance-based reduced-load period of time during which a unit is brought from a shutdown status to staged rates of firing for the sole purpose of curing new refractory lining of the unit, and shall not exceed 30 hours per occurrence. The operator shall maintain records of the duration of start-up, shutdown, and refractory curing periods. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

6. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4306 and 4320] Federally Enforceable Through Title V Permit

7. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/ccf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

8. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day, or 5840 lb/yr, or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
10. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

12. If FGR system on unit is not used or used intermittently, monitoring shall consist of use of a portable analyzer. If FGR system on unit is continuously used, monitoring shall consist of either use of a portable analyzer or monitoring of FGR rate based on parameters established during initial compliance source testing. The alternate monitoring scheme selected for this unit shall be established prior to implementation of this Authority to Construct. [District Rule 4306] Federally Enforceable Through Title V Permit

13. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOX, CO, and O2 concentrations is utilized and the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, all alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. If periodic monitoring of NOX, CO, and O2 concentrations is utilized, the permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. If periodic monitoring of FGR rate and firing rate is selected, the acceptable range of positions of the atmospheric combustion air control valve and fuel firing rates shall be established by testing emissions from this unit or other representative units, as approved by the District. The acceptable ranges shall be maintained during operation at levels which compliance with applicable NOx and CO emission rates have been demonstrated through source testing. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
18. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. Unless otherwise specified in the Permit to Operate, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0. For the purposes of permittee-performed alternate monitoring, emissions measurements may be performed at any time after the unit reaches conditions representative of normal operation. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

20. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

21. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

26. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

27. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

28. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1145-0
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER, OR DISTRICT APPROVED EQUIVALENT, AND FGR APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing pursuant to conditions 30, 34, 36, 37, 38 and 39 documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

6. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

14. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

15. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All alternate parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR in closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-1146-0

EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS.

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

6. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-1146-0; Aug 18 2011 9:37AM, DOUGH
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

14. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

15. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR in closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1147-1

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

ISSUANCE DATE: 06/21/2010

EQUIPMENT DESCRIPTION:
MODIFICATION OF 85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-
GLE BURNER, OR DISTRICT APPROVED EQUIVALENT, AND FGR APPROVED TO OPERATE AT VARIOUS
SPECIFIED LOCATIONS: LOWER NOX TO 7 PPMV, ENHANCE COMBUSTION CONTROLS AND ALTERNATIVELY
REPLACE EXISTING BURNER WITH COEN MODEL QLN-ULN ULTRA LOW NOX BURNER, OR NORTH AMERICAN
MODEL MAGNA FLAME LEX ULTRA LOW NOX BURNER, OR ACT GIDEON ULTRA LOW NOX BURNER, OR
EQUIVALENT TO ACHIEVE 7 PPMV NOX

CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures
   of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S,
   R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

3. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24
   hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule
   1070]

4. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance
   with permitted emission limits unless source testing pursuant to conditions 30, 34, 36, 37, 38 and 39 documents
   compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V
   Permit

5. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable
   Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
6. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

7. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

8. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 7 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

9. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

10. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 17.3 lb/day or CO: 37.7 lb/day. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

11. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

12. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201, 2520, 9.4.2 and 4320] Federally Enforceable Through Title V Permit

14. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

15. If periodic monitoring of NOx, CO, and O2 concentrations is utilized, the permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

16. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
17. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

20. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR in closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

22. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

23. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of initial start-up and whenever flue gas recirculation rate is changed. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

24. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

25. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

26. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

27. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

28. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

31. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

32. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

6. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4486, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

14. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

15. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR in closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1149-0
EXPANSION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS.

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

6. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-1149-0: Aug 18 2011 9:27AM - GOUGH
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

14. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

15. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR in closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1150-0

EQUIPMENT DESCRIPTION:
85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS.

PERMIT UNIT REQUIREMENTS

1. This unit is approved for operation at the following locations: NE/4 Section 33, T28S, R21E; SE/4 Section 33, T28S, R21E and SE/4 Section 28, T28S, R21E. [District Rule 4102]

2. Permittee shall notify the District Compliance Division of each location at which the unit is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District Rule 1070]

3. Flue gas recirculation (FGR) shall be utilized in conjunction with low-NOx burner to maintain ongoing compliance with permitted emission limits unless source testing documents compliance without utilizing the flue gas recirculation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Natural gas fuel sulfur content shall not exceed 0.75 grains S/100 scf. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Duration of start-up and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4305 and 4306] Federally Enforceable Through Title V Permit

6. Duration of refractory curing shall not exceed 30 hours per each occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

7. Emission rates, except during startup, shutdown, and refractory curing, shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, VOC: 0.0055 lb/MMBtu, NOx (as NO2): 9 ppmv @ 3% O2, or CO: 25 ppmv @ 3% O2. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

8. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406 and 4801] Federally Enforceable Through Title V Permit

9. Emission rates shall not exceed any of the following: PM10: 15.5 lb/day, SOx (as SO2): 4.4 lb/day, VOC: 11.2 lb/day, NOx (as NO2): 22.2 lb/day or CO: 37.7 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Annual quantity of natural gas fuel burned in this steam generator shall not exceed 730 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 3246, D 4084, D 4468, D 6667 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
12. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rules 1070, 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 1070, 2520, 9.4.2; 4305 and 4306] Federally Enforceable Through Title V Permit

14. Permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Measurement shall be made with the FGR system in the mode of operation (closed or open) in which it was used in the preceding 30 days. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 4305 and 4306] Federally Enforceable Through Title V Permit

15. If NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

16. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

18. All emissions measurements shall be made with the unit operating either at conditions representative of all operating modes, firing rates, and flue gas recirculation rates. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

19. Whenever the unit is switched to operate with the flue gas recirculation (FGR) system in the closed position, compliance source testing for NOx and CO shall be conducted within 60 days of cessation of FGR operation date unless source testing with FGR in closed position has occurred within the previous 12 months. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Compliance demonstration (source testing) shall be by District witnessed, or authorized, sample collection by ARB certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
21. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

22. Source testing to measure NOx and CO emissions from this unit shall be conducted within 60 days of any change in flue gas recirculation rate. [District Rules 2201, 4305 and 4306] Federally Enforceable Through Title V Permit

23. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

24. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

25. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

26. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D3246, D4084, D4468, D6667 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081, 4305 and 4306] Federally Enforceable Through Title V Permit

27. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

28. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

29. Copies of all fuel invoices showing quantity of supplier-certified gas delivered and copies of quality terms of supplier-certified gas delivery contracts shall be maintained. The operator shall record daily and annual amount, and types, of fuels combusted and all dates on which unit is fired on any non-certified fuel and record specific type of non-certified fuel used. [District Rules 2201 and 2520, 9.5.2] Federally Enforceable Through Title V Permit

30. Permittee shall maintain records of duration of each start-up and shutdown, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

31. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PROCESS HEATERS
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

10. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rules 2201, 2520, 4301 and 4801] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, and 4307] Federally Enforceable Through Title V Permit

13. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rules 2201, 2520, 4201, and 4307] Federally Enforceable Through Title V Permit

14. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4101, 4102, 4301 and 4801] Federally Enforceable Through Title V Permit

15. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.7 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

16. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

17. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of the duration of each start-up, and shutdown that exceed one hour per occurrence for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

19. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

20. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test-fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

21. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

22. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rules 4307] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

2. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rules 2201, 2520, 4301 and 4801] Federally Enforceable Through Title V Permit

3. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, and 4307] Federally Enforceable Through Title V Permit

4. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rules 2201, 2520, 4201, and 4301] Federally Enforceable Through Title V Permit

5. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4101, 4102, 4301 and 4801] Federally Enforceable Through Title V Permit

6. Emission rates shall not exceed any of the following: PM10: 0.8 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.6 lb/day, NOx (as NO2): 20.2 lb/day or 1325 lb/year, or CO: 16.9 lb/day or 1361 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

7. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

8. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081 and Kern Country Rule 108.1] Federally Enforceable Through Title V Permit

15. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4307] Federally Enforceable Through Title V Permit

16. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

17. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit’s operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

19. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rules 4307] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
21. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

22. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

24. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

25. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of Kern County Rules 108.1, 404, 408, and 407.2. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-663-15
EXPIRATION DATE: 05/31/2007

SECTION: 16 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:
NATURAL GAS/LPG-FIRED HEATER TREATER #V-203 WITH ONE 5.0 MMBTU/HR MAXON MODEL M-PAKT BURNER AND HEAT CROSSOVER LINE TO UNFIRED HEATER TREATER SECTION (LOCKWOOD)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

3. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992, and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District Rules 2201, 2520, 4301 and 4801] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup and shutdown shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, and 4307] Federally Enforceable Through Title V Permit

15. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District Rules 2201, 2520, 4201, and 4301] Federally Enforceable Through Title V Permit

16. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rules 4101, 4102, 4301 and 4801] Federally Enforceable Through Title V Permit

17. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.7 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

18. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

19. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permitee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

20. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

21. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
22. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

23. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

24. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rules 4307] Federally Enforceable Through Title V Permit

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclic firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

26. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

27. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

28. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4307] Federally Enforceable Through Title V Permit

29. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4307] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-666-13
EXPIRATION DATE: 05/31/2007

SECTION: 35  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
4.2 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER (#4) WITH ONE 4.2 MMBTU/HR MAXON MODEL M-PAKT BURNER AND HEAT CROSSOVER LINE TO UNFIRED HEATER TREATER SECTION (NATIONAL)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

2. Total sulfur content of natural gas combusted shall not exceed 0.75 grain/100 scf. [District NSR Rule and District Rules 4301 and 4801] Federally Enforceable Through Title V Permit

3. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District NSR Rule and District Rule 4307] Federally Enforceable Through Title V Permit

4. Emission rates shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (SO2): 0.002 lb/MMBtu, or VOC: 0.006 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Emission rates shall not exceed any of the following: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rule 4301] Federally Enforceable Through Title V Permit

6. Emission rates shall not exceed any of the following: PM10: 0.8 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.6 lb/day, NOx (as NO2): 20.2 lb/day and 1,325 lb/year, or CO: 16.9 lb/day and 1,361 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Compliance with sulfur emission limits or fuel sulfur content limits may be demonstrated by firing the unit only on PUC or FERC regulated natural gas, or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit, or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.3.1] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.4.1.1] Federally Enforceable Through Title V Permit

15. The owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4307, 5.4.1.2] Federally Enforceable Through Title V Permit

16. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4307, 5.4.1.2] Federally Enforceable Through Title V Permit

17. In lieu of tuning the unit twice each calendar year, the owner/operator shall monitor the emissions with a portable NOx analyzer at least twice each calendar year and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.4.1.2] Federally Enforceable Through Title V Permit

18. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NOx analyzing has been performed. [District Rule 4307, 6.1.2] Federally Enforceable Through Title V Permit

19. Tune-up records shall include: 1) date of tune-up, 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

20. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

21. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

22. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

24. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-990-12
EXPIRATION DATE: 05/31/2007

SECTION: 19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:
HEATER TREATER AND A HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM (LOST HILLS) WITH A PERMIT EXEMPT BURNER (NATURAL GAS-FIRED, 5.0 MMBTU/HR OR LESS)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. Vessel shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

4. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operation pressure/vacuum vent and vapor balance system. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total fugitive VOC emission rate from vapor recovery components associated with this emission unit shall not exceed 11.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any vessel gauging or sampling device or other appurtenance in vapor service on a vessel vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Except for periods of tank or vessel cleaning, vapor control system maintenance or power outages, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Formerly S-1511-621.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

3. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operation pressure/vacuum vent and vapor balance system. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Total fugitive VOC emission rate from vapor recovery components associated with this emission unit shall not exceed 11.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

7. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Any vessel gauging or sampling device or other appurtenance in vapor service on a vessel vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. All piping, fittings, valves, gauging and sampling devices and appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to be leaking during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Except for periods of tank or vessel cleaning, vapor control system maintenance or power outages, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Formerly S-1511-622.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vessel shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operation pressure/vacuum vent and vapor balance system. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Total fugitive VOC emission rate from vapor recovery components associated with this emission unit shall not exceed 12.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Any vessel gauging or sampling device or other appurtenance in vapor service on a vessel vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All piping, fittings, valves, gauging and sampling devices and appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Except for periods of tank or vessel cleaning, vapor control system maintenance or power outages, the operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit


These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Compliance with permit conditions in the Title V permit shall be deemed compliance with the requirements of County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), 110 (Madera) 402 (Madera), 404 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 405 (Madera), 408 (Fresno, Kern, Tulare, Kings, Stanislaus, Merced, and San Joaquin), 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin), and 408.2 (Merced). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements of SJVUAPCD Rules 4201 (Amended December 17, 1992), 4301 (Amended December 17, 1992), 4406 (Amended December 17, 1992), and Rule 4801 (Amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. This unit commenced construction, modification, or reconstruction prior to June 19, 1984. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) and 40 CFR 60.40c do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. Heater treater shall be fired exclusively on natural gas or LPG. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10: 0.012 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.004 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv as S02, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 1.2 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 20.2 lb/day or 2649 lb/year, or CO: 4.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

20. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

21. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
22. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

23. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

25. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Heater treater and appurtenances shall be maintained gastight (as defined in Rule 4623 (9/19/91)) except during periods of unit maintenance or cleaning, vapor control system maintenance, and power curtailment. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

27. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during four consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
32. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. Formerly S-1511-627.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

4. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; and 4307] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; and 4307] Federally Enforceable Through Title V Permit

11. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

12. A non-resettable, totaling mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit

13. Unit shall be operated in accordance with the manufacturer's recommendations. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 4.3 lb/day, or CO: 4.4 lb/day. [District Rule 2201 and 4307] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

18. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

19. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rules 2520, 9.4.2, and 4307] Federally Enforceable Through Title V Permit

20. If either the NOx or CO concentrations corrected to 3% O2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 2520, 9.4.2 and 4307] Federally Enforceable Through Title V Permit

21. If the unit is tuned for compliance, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). Permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
22. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4307] Federally Enforceable Through Title V Permit

23. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

24. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

25. Records of tune-up and monitoring of the operational characteristics of the unit shall be maintained. [District Rule 4307] Federally Enforceable Through Title V Permit

26. Records of monthly and annual heat input of the unit shall be maintained. [District Rules 2201 and 4307] Federally Enforceable Through Title V Permit

27. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

28. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

29. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
34. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

35. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

36. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months (no more than 30 days before or after the required 36-month source test date). If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4306] Federally Enforceable Through Title V Permit

39. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

40. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rule 1081 and 4307] Federally Enforceable Through Title V Permit

41. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

42. All records shall be maintained for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070 and 4306] Federally Enforceable Through Title V Permit

43. Note: Formerly S-1511-628

These terms and conditions are part of the Facility-wide Permit to Operate.
**San Joaquin Valley**

**Air Pollution Control District**

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**PERMIT UNIT: S-1547-998-17**

**SECTION:** NE14  **TOWNSHIP:** 31S  **RANGE:** 22E

**EQUIPMENT DESCRIPTION:**

5.0 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE 5.0 MMBTU/HR MAXON MODEL M-PAKT BURNER AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101B - ALBERTA SHALE LEASE)

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**PERMIT UNIT REQUIREMENTS**

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

3. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Unit shall be equipped with a non-resettable fuel flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Unit shall be operated in accordance with the manufacturer's recommendations. [District NSR Rule] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.
Permit Unit Requirements for S-1547-998-17 (continued) 

10. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.014 lb/MMBtu, 
SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or 
CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District NSR Rule and District Rules 4201, 4301, 4307, 4405, 4406, 
4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

11. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 
grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur 
(as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds 
per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally 
Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 3.4 lb/day, SOx (as SO2): 0.5 lb/day, VOC: 0.7 lb/day, 
NOx (as NO2): 33.6 lb/day or 3154 lb/year, or CO: 8.9 lb/day. [District NSR Rule] Federally Enforceable Through 
Title V Permit

13. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally 
Enforceable Through Title V Permit

14. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence for a 
period of five years and make such records readily available for District inspection upon request. [District Rule 4307] 
Federally Enforceable Through Title V Permit

15. The permittee shall monitor, at least once per month, the unit’s operational characteristics recommended by the 
manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

16. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified 
technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a 
continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is 
required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit 
for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the 
operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit’s operating 
parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally 
Enforceable Through Title V Permit

17. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) 
a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of 
the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

18. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the 
NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) 
make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any 
corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational 
characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal 
operations or conditions specified in the Permit to Operate. No determination of compliance shall be established 
within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 
30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above 
and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of 
its normal operation, source testing may commence sooner than specified above and continue through its normal 
cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

20. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except 
during vessel cleaning, repair and maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. 
[District NSR Rule] Federally Enforceable Through Title V Permit
22. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit


These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

5. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

7. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Unit shall be operated in accordance with the manufacturer's recommendations. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup, shutdown and refractory curing shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup, shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 33.6 lb/day or 1577 lb/year, or CO: 4.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up and shutdown shall not exceed one hours each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

23. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

24. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

25. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
32. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4307] Federally Enforceable Through Title V Permit

35. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4307] Federally Enforceable Through Title V Permit

36. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4307] Federally Enforceable Through Title V Permit

37. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

38. Formerly S-1511-632.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Unit shall be operated in accordance with the manufacturer's recommendations. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2; 4305, 6.2.1, and 4351, 6.2.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4305, 4306, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 1.9 lb/day, SOx (as SO2): 0.5 lb/day, NOx (as NO2): 24.0 lb/day or 3154 lb/year, or CO: 20.2 lb/day or 3241 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of startup and shutdown shall not exceed 2 hours each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each startup and shutdown that exceed two hours per occurrence for a period of five years and make such records readily available for District inspection upon request. [District Rule 4306] Federally Enforceable Through Title V Permit

17. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307]

18. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307]

19. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307]

20. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307]

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307]
22. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623 (9/19/91)) condition except during vessel cleaning, repair and maintenance not to exceed 1-hour each per occurrence. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

23. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Formerly S-1511-644

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates upon which the unit is fired and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

4. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

5. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

6. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2]

7. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2]

8. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Unit shall be equipped with a non-resettable fuel flow meter. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Unit shall be operated in accordance with the manufacturer's recommendations. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.014 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, VOC: 0.003 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

12. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 1.7 lb/day, SOx (as SO2): 0.2 lb/day, VOC: 0.4 lb/day, NOx (as NO2): 33.6 lb/day or 3154 lb/year, or CO: 8.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

17. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

19. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

22. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE.KERN COUNTY, CA
5-1547-1001-17: Aug 18 2011 3:32PM - Gough
23. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-865.
   [District Rule 2201] Federally Enforceable Through Title V Permit

24. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Gas-tight (as defined in District Rule 4623, 5.3.3) shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Formerly S-1511-634.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

2. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Emission rates, except during startup and shutdown, shall not exceed any of the following: NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District NSR Rule and District Rule 4307] Federally Enforceable Through Title V Permit

4. Emission rates shall not exceed either of the following: PM10: 0.008 lb/MMBtu or SOx (SO2): 0.002 lb/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Emission rates shall not exceed any of the following: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or NO2 - 140 pounds per hour. [District Rule 4301] Federally Enforceable Through Title V Permit

6. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day and 1,577 lb/year, or CO: 20.2 lb/day and 1,621 lb/yr. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Compliance with sulfur emission limits or fuel sulfur content limits may be demonstrated by firing the unit only on PUC or FERC regulated natural gas, or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit, or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D 3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rules 2520, 9.4.2; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rules 2520, 9.4.2; and 4351, 6.2.1] Federally Enforceable Through Title V Permit

12. The duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307, 5.3.1] Federally Enforceable Through Title V Permit

13. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

14. The owner/operator shall monitor, at least once a month, the operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307, 5.4.1.1] Federally Enforceable Through Title V Permit

15. The owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rule 4307, 5.4.1.2] Federally Enforceable Through Title V Permit

16. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4307, 5.4.1.2] Federally Enforceable Through Title V Permit

17. In lieu of tuning the unit twice each calendar year, the owner/operator shall monitor the emissions with a portable NOx analyzer at least twice each calendar year and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307, 5.4.1.2] Federally Enforceable Through Title V Permit

18. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District NSR Rule] Federally Enforceable Through Title V Permit

19. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

21. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit
22. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. The owner/operator shall maintain records to verify that the required monitoring of the operational characteristics, and tune-ups or portable NOx analyzing has been performed. [District Rule 4307, 6.1.2] Federally Enforceable Through Title V Permit

31. Tune-up records shall include: 1) date of tune-up; 2) name of technician performing tune-up, and 3) reason that they are qualified. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

32. Portable analyzer records shall include: 1) date of emissions analyzing, 2) results of emissions analyzing, 3) name of technician performing analyzing, 4) make and model of analyzer, 5) date of last calibration of the analyzer, and 6) a description of any adjustments made to the unit's operating parameters for the purposes of assuring compliance. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
33. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

34. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 4307, 6.1] Federally Enforceable Through Title V Permit

36. Formerly S-1511-640.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1006-14

SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
5 MMBTU/HR GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER
AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND A FLUID TREATMENT
CHAMBER SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-
884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
[District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally
Enforceable Through Title V Permit

5. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three
minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
Federally Enforceable Through Title V Permit

6. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil.
[District Rule 2201] Federally Enforceable Through Title V Permit

7. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
2520, 9.3.2] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time
for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

9. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the fluid treatment chamber shall be connected to a vapor recovery system consisting of a closed vent system that collects all VOCs from the fluid treatment chamber and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Emission rates, except during startup shutdown and refractory curing shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2, and VOC: 0.0055 lb/MMBtu. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

15. Emission rates during startup shutdown and refractory curing shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

16. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

18. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

20. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit
21. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

22. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

23. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

24. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

25. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

26. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

28. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

29. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair or maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
31. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

38. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

39. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

40. Formerly S-1511-641.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1007-14
EXPIRATION DATE: 05/31/2007

SECTION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
GAS-FIRED HEATER TREATER WITH 5.0 MMBTU/HR MAXON MODEL M-PAKT BURNER S VENTED TO VAPOR
CONTROL SYSTEM LISTED ON S-1547-843. (#D201C) (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
2. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil.
   [District Rule 2201] Federally Enforceable Through Title V Permit
3. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843.
   [District Rule 2201] Federally Enforceable Through Title V Permit
4. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas
   delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all
   dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule
   2520, 9.3.2] Federally Enforceable Through Title V Permit
5. The operator shall maintain all records of required monitoring data and support information for inspection at any time
   for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit
6. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis,
   each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur
   content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-
   annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District
   Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
7. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once
   every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units
   using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans
   performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating
   compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however,
   annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally
   Enforceable Through Title V Permit
8. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel
   sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using
   ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in
   the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each
   fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with
   ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

11. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

12. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307]

14. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

15. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

16. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be tested to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

17. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

18. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

19. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

20. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623 (9/19/91)) condition except during vessel cleaning, repair and maintenance. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit
21. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Formerly S-1511-642.

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MBtu, SOx (as SO2): 0.002 lb/MBtu, NOx (as NO2): 0.036 lb/MBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MBMtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MBMtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 1577 lb/year, or CO: 20.2 lb/day or 1621 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

23. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623 (9/19/91)) condition except during vessel cleaning, repair and maintenance. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

24. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Formerly S-1511-643.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emission rates, except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 3154 lb/year, or CO: 20.2 lb/day or 3241 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

16. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall monitor, at least once per month, the units's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

23. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623 (9/19/91)) condition except during vessel cleaning, repair and maintenance. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

24. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Formerly S-1511-644.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. Emissions of sulfur compounds from this unit shall not exceed 200 lb per hour, calculated as SO2. Compliance with this requirement may be demonstrated by firing the unit only on PUC or FERC regulated natural gas; or by testing the sulfur content of each fuel and determining the maximum hourly emissions of sulfur compounds by multiplying the sulfur content of each fuel in lb/MMBtu by the maximum heat input rating of the unit; or by source testing in combination with fuel analysis. [District Rule 2520, 9.4.2 and District Rule 4301, 5.2.1] Federally Enforceable Through Title V Permit

8. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.21] Federally Enforceable Through Title V Permit

11. Emission rates during startup and shutdown shall not exceed any of the following: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

12. Emission rates except during startup and shutdown shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

14. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

15. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

16. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

17. The permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

19. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit
21. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

22. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit

23. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623 (9/19/91)) condition except during vessel cleaning, repair and maintenance. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

24. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
30. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Formerly S-1511-645.

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-1011-15  
SECTION: NE35  
TOWNSHIP: 12N  
RANGE: 24W

EQUIPMENT DESCRIPTION:  
NATURAL GAS-FIRED HEATER TREATER (#D201G) WITH ONE 5 MMBTU/HR MAXON MODEL M-PAKT BURNER  
WITH AND A FLUID TREATMENT CHAMBER SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1547-843 (SOUTH MIDWAY)

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]  
Federally Enforceable Through Title V Permit

3. Heater treater shall be fired exclusively on natural gas or LPG and shall have no provisions for firing on fuel oil.  
[District Rule 2201] Federally Enforceable Through Title V Permit

4. Fluid treatment chamber of heater treater shall be connected to vapor control system listed on PTO S-1547-843.  
[District Rule 2201] Federally Enforceable Through Title V Permit

5. Copies of all fuel invoices showing quantity and delivery points of gas delivered and copies of quality terms of gas delivery contracts shall be maintained. The operator shall record daily amount and type(s) of fuel(s) combusted and all dates on which unit is fired on any noncertified fuel and record specific type of noncertified fuel used. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

7. When complying with sulfur emission limits by fuel analysis or by a combination of source testing and fuel analysis, each fuel source shall be tested weekly for sulfur content and higher heating value. If compliance with the fuel sulfur content limit has been demonstrated for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If a semi-annual fuel content source test fails to show compliance, weekly testing shall resume. [District Rule 2520, 9.2] Federally Enforceable Through Title V Permit

8. When complying with SOx emission limits by testing of stack emissions, testing shall be performed not less than once every 12 months using EPA Method 6; or EPA Method 6B; or EPA Method 8; or ARB Methods 8 or 100; or, for units using gaseous fuel scrubbed for sulfur pre-combustion, a grab sample analysis by double GC for H2S and mercaptans performed in the laboratory and EPA Method 19 to calculate emissions. Gaseous fuel fired units demonstrating compliance on two consecutive annual source tests shall be tested not less than once every thirty-six months; however, annual source testing shall resume if any test fails to show compliance. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. If the unit is fired on noncertified gaseous fuel and compliance with SOx emission limits is achieved through fuel sulfur content limitations, then the sulfur content of the gaseous fuel being fired in the unit shall be determined using ASTM D 1072, D 4468, D 4084, D3246 or grab sample analysis by double GC for H2S and mercaptans performed in the laboratory. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. If fuel analysis is used to demonstrate compliance with conditions of this permit, the fuel higher heating value for each fuel shall be certified by a third party fuel supplier or determined by ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. Emission rates, except during startup and shutdown, shall not exceed any of the following: PM10: 0.008 lb/MMBtu, SOx (as SO2): 0.002 lb/MMBtu, NOx (as NO2): 0.036 lb/MMBtu or 30 ppmv @ 3% O2, or CO: 0.037 lb/MMBtu or 50 ppmv @ 3% O2. [District Rules 2201, 2520, 4201, 4301, 4307, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

12. Emission rates during startup and shutdown shall not exceed: particulate matter - 10 pounds per hour, or 0.1 grains/dscf calculated to 12% CO2; sulfur - 200 pounds of SO2 per hour, or 2000 ppmv as SO2, or 0.11 pounds sulfur (as S) per MMBtu on average-wide basis for all units in Rule 4406 plan; NO2 - 140 pounds per hour or 0.14 pounds per MMBtu. [District Rules 4101, 4102, 4301, 4405, 4406, 4801 and Kern County Rules 424 and 425] Federally Enforceable Through Title V Permit

13. Emission rates shall not exceed any of the following: PM10: 1.0 lb/day, SOx (as SO2): 0.2 lb/day, NOx (as NO2): 24.0 lb/day or 3154 lb/year, or CO: 20.2 lb/day or 3241 lb/yr. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Duration of start-up and shutdown shall not exceed one hour each per occurrence. [District Rule 4307] Federally Enforceable Through Title V Permit

15. Duration of refractory curing shall not exceed 30 hours each per occurrence. Permittee shall notify the District in writing prior to refractory curing. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall maintain records of duration of each start-up and shutdown that exceed one hour per occurrence, and refractory curing, for a period of five years and make such records readily available for District inspection upon request. [District Rule 4307] Federally Enforceable Through Title V Permit

17. The permittee shall monitor, at least once per month, the unit's operational characteristics recommended by the manufacturer and approved by the APCO. [District Rule 4307] Federally Enforceable Through Title V Permit

18. The permittee shall tune the unit at least twice per calendar year, (from four to eight months apart) using a qualified technician in accordance with the procedure described in Rule 4304. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for a calendar year. No tune-up is required if the unit is not operated during that calendar year. The unit may be test fired to verify availability of the unit for its intended use, but once the test firing is complete the unit shall be shutdown. In lieu of tuning the unit, the operator shall monitor the emissions, at least monthly, with a portable NOx analyzer and adjust the unit's operating parameters accordingly to assure compliance with the emission limits of this rule. [District Rule 4307] Federally Enforceable Through Title V Permit

19. If the unit is tuned for compliance, the permittee shall maintain records of: (1) the date that tune-ups are performed, (2) a description of any corrective action taken to maintain the emissions within the acceptable range, and (3) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

20. If NOx emissions are monitored for compliance, the permittee shall maintain records of: (1) the date and time of the NOx measurements, (2) the O2 concentration in percent and the measured NOx concentration corrected to 3% O2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, (5) a description of any corrective action taken to maintain the emissions within the acceptable range, and (6) a record of the operational characteristics monitored. [District Rule 4307] Federally Enforceable Through Title V Permit

21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4307. Notwithstanding the requirements above and per Section 5.5.4 of Rule 4307, for units with a cyclical firing period that routinely interrupts fuel flow as part of its normal operation, source testing may commence sooner than specified above and continue through its normal cyclical firing period. [District Rule 4307] Federally Enforceable Through Title V Permit
Permit Unit Requirements for S-1547-1011-15 (continued)  

22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rule 4307] Federally Enforceable Through Title V Permit

23. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or ARB Method 100, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B or ARB Method 100, stack gas oxygen - EPA Method 3 or 3A or ARB Method 100, SOx (lb/MMBtu) - ARB Method 8 or 100 or EPA Method 6, 6B or 8 or fuel gas sulfur content analysis and EPA Method 19, fuel gas sulfur content - ASTM D1072, D4468, D3246, D3246, D4084 or double GC for H2S and mercaptans performed in laboratory, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [District Rules 1081 and 4307] Federally Enforceable Through Title V Permit

25. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rule 4307] Federally Enforceable Through Title V Permit

26. Vessel covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623 (9/19/91)) condition except during vessel cleaning, repair and maintenance. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

27. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
33. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

35. Note: Formerly S-1511-646.
TANKS
PERMIT UNIT REQUIREMENTS

1. Tank shall store crude oil only. [District NSR Rule] Federally Enforceable Through Title V Permit

2. True vapor pressure of liquid stored shall not exceed 2.0 psia. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Maximum tank throughput shall not exceed 10,000 bbl/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Liquid shall be removed from tank by pipeline only. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Tank water draw-off shall be pumped to T600, S-1547-652. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank shall be equipped with a cover consisting of either a pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [40 CFR 60.112a(a)(1), District Rule 4623, 5.1.2] Federally Enforceable Through Title V Permit

7. Roof shall be floating on the liquid (i.e., off the roof leg supports) at all times except during initial fill and when tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112a(a)(1)] Federally Enforceable Through Title V Permit

8. Accumulated area of gaps between tank wall and primary seal shall not exceed 10.0 in² per foot of tank diameter and the width of any portion of any gap shall not exceed one and one-half (1½) inch. [40 CFR 60.112a(a)(1)(i)(A), District Rule 4623, 5.1.3.1] Federally Enforceable Through Title V Permit

9. Cumulative length of all gaps, between the tank shell and the primary seal: 1) Greater than one-half (½) inch shall not exceed 10 percent of the circumference of the tank; and 2) Greater than one-eighth (1/8) inch shall not exceed 30 percent of the circumference of the tank. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

10. The primary seal shall have no continuous gap greater than one-eighth (1/8) inch shall exceed 10 percent of the tank circumference. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

11. Gap between the tank shell and secondary seal shall not exceed one-half (1/2) inch. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

12. Cumulative length of all gaps between the tank shell and secondary seal greater than one-eighth (1/8) inch shall not exceed 5 percent of the tank circumference. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
13. One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface. [40 CFR 60.112a(a)(1)(i)(C), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

14. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope of the primary seal. [40 CFR 60.112a(a)(1)(i)(D), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

15. Secondary seal shall be installed above the primary seal. [40 CFR 60.112a(a)(1)(ii)(A)] Federally Enforceable Through Title V Permit

16. Accumulated area of gaps between tank wall and the secondary seal shall not exceed 1.0 sq inch per foot of tank diameter and the width of any portion of any gap shall not exceed one-half (1/2) inch. [40 CFR 60.112a(a)(1)(i)(B)] Federally Enforceable Through Title V Permit

17. Secondary seal shall have no openings, holes or tears in the seal or seal fabric. [40 CFR 60.112a(a)(2)(ii)(C), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

18. Geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least eighteen inches in the vertical plane above the liquid surface. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

19. Secondary seal shall allow easy insertion of probes up to one and one-half (1-1/2) inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

20. Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

21. Operator shall be exempt from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal. [40 CFR 60.112a(a)(1)(ii)(C)] Federally Enforceable Through Title V Permit

22. Each roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [40 CFR 60.112a(a)(1)(iv), District Rule 4623, 5.1.6] Federally Enforceable Through Title V Permit

23. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

24. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas-tight, except when the device or appurtenance is in use. Gas-tight shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 6.1] Federally Enforceable Through Title V Permit

25. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
26. A facility operator, upon detection of a leaking cover, seal, or lid, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. An operator shall reinspect a cover, seal, or lid for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Emissions from covers, seals, or lids which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting reinspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Any leak in a cover, seal, or lid shall be repaired to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Automatic bleeder vents shall be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

33. Rim vents shall be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

34. Operator shall perform gap measurements on primary seals within 60 days of the initial fill and at least once every 5 years thereafter. Operator shall perform gap measurements on secondary seals within 60 days of the initial fill with petroleum liquid and at least once every year thereafter. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill. [40 CFR 60.113a(a)(1)(i)(A), (B), and (C)] Federally Enforceable Through Title V Permit

35. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(C)] Federally Enforceable Through Title V Permit

36. Operator shall determine gap widths in the primary and secondary seals using the following procedure: 1) Measure seal gaps, at one or more floating roof levels when the roof is floating off leg supports; 2) Measure seal gaps around entire circumference of the tank in each place where a one-eighth (1/8) inch diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location; 3), Total surface area of each gap shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance; 4) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank. [40 CFR 60.113a(a)(1)(ii) and (iii)] Federally Enforceable Through Title V Permit
37. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, and raw data obtained in the measurement process in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(D)] Federally Enforceable Through Title V Permit

38. Operator shall provide the APCO with 30 days notice of the gap measurement to afford the District the opportunity to have an observer present. [40 CFR 60.113a(a)(1)(iv)] Federally Enforceable Through Title V Permit

39. If the accumulated area of gaps or gap width exceed limits, operator shall submit a report to the District within 60 days of the date of measurement. Report should include identification of the vessel, reason vessel did not meet the specifications, and a description of the actions necessary to bring the storage vessel into compliance. [40 CFR 60.113a(a)(1)(i)(E)] Federally Enforceable Through Title V Permit

40. The primary seal envelope shall be made available for unobstructed inspection by the District personal on an annual basis at locations selected along its circumference at random by the District personal and minimum of four (4) locations shall be made available. If the District personal suspects a violation may exist, further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 5.1.4] Federally Enforceable Through Title V Permit

41. Operator shall keep a record of liquids stored in each container, period of storage, storage temperature, and both the Reid and maximum true vapor pressure of such liquids. [District Rule 4623, 6.1 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

42. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-82 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100ø F true vapor pressure shall be determined by Reid vapor pressure at 100ø F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

43. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

44. Maximum true vapor pressure may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.115a(b)] Federally Enforceable Through Title V Permit

45. Permittee shall maintain accurate daily records of the tank throughput and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Storage temperature shall not exceed 200 deg. F. [District NSR Rule] Federally Enforceable Through Title V Permit

2. True vapor pressure of liquid stored shall be less than 0.5 psia. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Only crude oil shall be stored. [District NSR Rule] Federally Enforceable Through Title V Permit

4. No truck loading shall occur. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Water draw-off shall be accomplished so as to prevent odoriferous emissions. [District Rule 4102]

6. Tank shall have no sulfur compound emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Average daily throughput (on an annual basis) shall not exceed 3,000 bbl/day. [District NSR Rule] Federally Enforceable Through Title V Permit

8. VOC emission rate shall not exceed 0.64 lbm/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Operator shall keep accurate records of annual throughput, storage temperature and the maximum true vapor pressure (periodic sampling of no less than once a year) of liquids stored and shall make readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

11. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

12. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall vent only through vapor collection system and discharge only to gas gathering system. [District NSR Rule] Federally Enforceable Through Title V Permit

2. P/v vents shall be set to relieve at a pressure higher than required to activate vapor compressor. [District NSR Rule] Federally Enforceable Through Title V Permit

3. During normal operation, p/v vents shall be vapor tight except for in-breathing. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Condensate shall be disposed of in a manner preventing VOC emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The tank shall be equipped with a vapor loss prevention system consisting of vapor and condensate collection systems capable of reducing VOC emissions by at least 95%. [District Rule 4623, 5.6.1] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.16] Federally Enforceable Through Title V Permit

7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

8. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

9. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 25. [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The permittee shall keep accurate records of Reid vapor pressure, storage temperature and types of liquids stored, for a period of five years, and shall make such records available for District inspection upon request. [District Rule 4623 and Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-442-15
EXPIRATION DATE: 05/31/2007

SECTION: 16 TOWNSHIP: 32S RANGE: 23E

EQUIPMENT DESCRIPTION:
4,200 GALLON FIXED ROOF TANK T-116 (10 FT DIAMETER X 8 FT HIGH) WITH VAPOR CONTROL SYSTEM INCLUDING PRE/AFTER COOLERS, SUCTION & DISCHARGE KNOCKOUT VESSELS (S-1547-1204 AND '1205), 2 - 100 HP COMPRESSORS, 2-SULFUR SCRUBBING TOWERS, AND ASSOCIATED PIPING SERVING LOCKWOOD/REPUBLIC LeASES

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall serve tanks S-1547-442, '-443, '-584 through '-587, & '-658, and produced gas piping from the Republic Lease, Sections 5, 7, and 8. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The operator shall ensure that the vapor control system is functional and is operating as designed whenever organic liquids or organic liquid vapors are contained in tanks S-1547-442, '-443, '-584 through '-587, & '-658. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

3. Collected vapors shall be reinjected into DOGGR approved wells or incinerated in steam generators S-1547-159 and S-1547-656. Standby incineration shall be provided in flare S-1547-588 during steam generator shut-down. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Only wells approved by the California Department of Conservation Division of Oil, Gas and Geothermal Resources shall be use for reinjection. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The tank shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor control system shall be APCO-approved and maintained in leak free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.7 of Rule 2201. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

6. Dry H2S scrubbing towers shall be utilized as necessary to maintain compliance with sulfur compounds emission limits of steam generators approved to incinerate vapors from control system. [District NSR Rule and District Rule 4801] Federally Enforceable Through Title V Permit

7. Sulfur scrubbing systems shall use District approved scrubbing agents. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Vapor space piping shall also be shared with produced gas piping from the Republic Lease, Sections 5, 7, and 8. [District NSR Rule] Federally Enforceable Through Title V Permit

9. VOC fugitive emissions from the vapor control system and gas components serving the tank battery shall not exceed 26.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

10. If VOC vapor disposal device is inoperative, collected vapors shall not be vented to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Tank vapors shall only vent to vapor collection system described on this permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

13. VOC fugitive emissions from the tank T-116 and gas components serving the tank battery shall not exceed 1.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

14. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

16. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

17. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

18. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

19. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

20. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

21. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

22. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

23. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
24. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

25. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

26. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-443-11
EXPIRATION DATE: 05/31/2007

SECTION: 16  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
84,000 GALLON FIXED ROOF (29.7 FT. DIAMETER X 26.25 FT. HIGH) CONE BOTTOM SURGE TANK T-115
CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)

PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 2.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

5. Except during cleaning operations, emissions shall not exceed 2.81 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Vapor control system shall be equipped with separator vessel(s), suction scrubbers, discharge scrubber(s), H2S scrubber(s), heat exchanger(s), vapor compressor(s), vapor piping to vapor control system listed in S-1135-20, uncondensed vapor line from the steam enhanced well vapor control system listed on S-1135-20 and vapor piping to steam generators S-1547-234, '238 and '248 or S-1135-12 and '24. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Maximum VOC content of vapor in the vapor control system piping attached to S-1135-20 shall not exceed 10% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Vapor control efficiency shall be maintained at no less than 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Except during authorized tank cleaning operations, the operator shall ensure that the vapor recovery system is functional and operating as designed whenever organic liquids or organic liquid vapors are present in the tanks or associated piping. The operator shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8240, shall be vented to the atmosphere at one time. [District NSR Rule] Federally Enforceable Through Title V Permit

11. There shall be no throughput during cleaning of this tank. [District NSR Rule] Federally Enforceable Through Title V Permit

12. This tank shall not be cleaned more often than once per quarter. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank roof, seams, welds, joints, gauge hatches, sample wells, pressure relief valves, etc. shall be maintained in a leak-free condition (as defined in District Rule 4623, amended 12/20/01). [District NSR Rule] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall notify the District Compliance division in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least two hours after all the liquid in the tank has been drained; or 2) Displace VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) Exhaust VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Tank cleaning shall be performed using one of the following solvents: water, hot water, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams per liter VOC content or less. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date and time that tank cleaning was initiated, the date and time tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2080 and 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District NSR Rule and District Rule 9.3.2] Federally Enforceable Through Title V Permit
23. The pressure transmitters shall be inspected and maintained in good operating condition. The inspections shall be conducted not more than once per quarter. Replacing and repairing of pressure transmitters shall not exceed one hour per day per transmitter. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of dates of periodic tank inspections. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4623, 6.3] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8240, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Vapor collection system shall not discharge to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Vapor control efficiency shall be maintained at no less than 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, re-inspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 25. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

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Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020]

27. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080]

28. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201]

29. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapor floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V / Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080]

30. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080]

31. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-462-8                            EXPIRATION DATE: 05/31/2007
SECTION: NE35    TOWNSHIP: 32S    RANGE: 23E

EQUIPMENT DESCRIPTION:
21,000 GALLON (500 BBL) WELDED, PETROLEUM FIXED ROOF SAND TANK (#T-500) WITH VAPOR CONTROL
SYSTEM LISTED ON PTO # S-1547-460 (NATIONAL RECYCLE PLANT)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all
storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24
months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid
stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through
Title V Permit

3. The API gravity of crude oil or petroleum distillate shall be determined by using ASTM Method D 287 el "Standard
gravity shall be performed in accordance with ASTM Method D 4057 "Standard Practices for Manual Sampling of
Petroleum and Petroleum Products." [District Rule 4623] Federally Enforceable Through Title V Permit

4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the
Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy
Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable
Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per
liter, as determined by EPA Test Method 413.2, 428.1 or 8240, shall be vented to the atmosphere at one time. [District
Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V
Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through
Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable
Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District NSR Rule] Federally
Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District NSR
Rule] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR
Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Vapor control efficiency shall be maintained at no less than 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

13. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit

14. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 18. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit
22. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

25. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020]

26. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080]

27. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201]

28. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080]

29. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080]

30. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8240, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Vapor control efficiency shall be maintained at no less than 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

13. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit

14. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 18. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit
22. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

25. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020]

26. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080]

27. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201]

28. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3 \times V}{Q}, \] where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080]

29. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080]

30. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-465-7
EXPIRATION DATE: 05/31/2007

SECTION: NE35  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
126,000 GALLON (3,000 BBL) WELDED, FIXED ROOF PETROLEUM STOCK TANK (#T-108) WITH VAPOR CONTROL SYSTEM LISTED ON S-1547-460 (NATIONAL DEHY)

PERMIT UNIT REQUIREMENTS

1. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

2. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit


4. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

5. During tank cleaning, only one tank containing liquids with a concentration greater than 35 milligrams of VOC per liter, as determined by EPA Test Method 413.2, 428.1 or 8240, shall be vented to the atmosphere at one time. [District Rule 2201] Federally Enforceable Through Title V Permit

6. There shall be no throughput during cleaning of this tank. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall not be cleaned more often than once per quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Tank vapors shall be vented to vapor control system listed on permit S-1547-460. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Tank shall be equipped with vapor control system set to activate prior to PV valve venting pressures. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The tank PV valve shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Vapor collection system shall not discharge to atmosphere. [District NSR Rule]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
13. Vapor control efficiency shall be maintained at no less than 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

14. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 18. [District Rule 4623, 6.4.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

26. This permit authorizes tank cleaning that is not the result of breakdowns or maintenance as a routine maintenance activity. [District Rule 2020]

27. Prior to opening the tank to allow tank cleaning the following procedure must be followed: operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed (except for PV valve venting on tanks not required to have a vapor recovery system). Drain all liquid from the tank to the maximum extent feasible prior to opening the tank. [District Rule 2080]

28. Tank pressure/vacuum valve (varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions by plugging the opening during removal of the varec valve. [District Rule 2201]

29. Prior to opening the tank to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least two hours after all the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080]

30. Allowable methods of cleaning include using steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080]

31. Permittee shall maintain records of dates of periodic tank inspections, start and completion dates/times of tank cleaning activities, and methods of cleaning used. [District Rule 2080]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-584-14 : Jul 5 2011 4:50PM - C0UGHD
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-4531R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-586-11 Jul 5 2011 4:50PM - GOUGH
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-604-1
EXPIRATION DATE: 05/31/2007
SECTION: 01  TOWNSHIP: 11N  RANGE: 24W
EQUIPMENT DESCRIPTION:
42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #T-405 (D&E RECYCLE PLANT)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of stored liquids shall be less than 0.5 psia. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-607-1
EXPIRATION DATE: 05/31/2007
SECTION: 01  TOWNSHIP: 11N  RANGE: 24W
EQUIPMENT DESCRIPTION:
84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #T-403 (D&E RECYCLE PLANT)

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of stored liquids shall be less than 0.5 psia. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of stored liquids shall be less than 0.5 psia. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Storage temperature shall not exceed 194 degrees F. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with operational temperature indicator for stored liquids. [District NSR Rule] Federally Enforceable Through Title V Permit

3. True vapor pressure of stored liquids at storage temperature shall be less than 1.5 psia. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Daily throughput of crude oil shall not exceed 15,000 barrels per day without prior District approval. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Emissions of volatile organic compounds (VOC) shall not exceed 0.001 lb/bbl throughput. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank shall be equipped with a cover consisting of either a pontoon-type or double-deck-type cover which rests upon the surface of the liquid being stored and is equipped with a closure device between the tank shell and roof edge consisting of a primary and a secondary seal. [40 CFR 60.112a(a)(1), District Rule 4623, 5.1.2] Federally Enforceable Through Title V Permit

7. Roof shall be floating on the liquid (i.e., off the roof leg supports) at all times except during initial fill and when tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. [40 CFR 60.112a(a)(1)] Federally Enforceable Through Title V Permit

8. Accumulated area of gaps between tank wall and primary seal shall not exceed 10.0 in² per foot of tank diameter and the width of any portion of any gap shall not exceed one and one-half (1½) inch. [40 CFR 60.112a(a)(1)(i)(A), District Rule 4623, 5.1.3.] Federally Enforceable Through Title V Permit

9. Cumulative length of all gaps, between the tank shell and the primary seal: 1) Greater than one-half (½) inch shall not exceed 10 percent of the circumference of the tank; and 2) Greater than one-eighth (1/8) inch shall not exceed 30 percent of the circumference of the tank. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

10. The primary seal shall have no continuous gap greater than one-eighth (1/8) inch shall exceed 10 percent of the tank circumference. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

11. Gap between the tank shell and secondary seal shall not exceed one-half (1/2) inch. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

12. Cumulative length of all gaps between the tank shell and secondary seal greater than one-eighth (1/8) inch shall not exceed 5 percent of the tank circumference. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit
13. One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 24 inches above the stored liquid surface. [40 CFR 60.112a(a)(1)(i)(C), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

14. There shall be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope of the primary seal. [40 CFR 60.112a(a)(1)(i)(D), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

15. Secondary seal shall be installed above the primary seal. [40 CFR 60.112a(a)(1)(ii)(A)] Federally Enforceable Through Title V Permit

16. Accumulated area of gaps between tank wall and the secondary seal shall not exceed 1.0 sq inch per foot of tank diameter and the width of any portion of any gap shall not exceed one-half (1/2) inch. [40 CFR 60.112a(a)(1)(i)(B)] Federally Enforceable Through Title V Permit

17. Secondary seal shall have no openings, holes or tears in the seal or seal fabric. [40 CFR 60.112a(a)(2)(ii)(C), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

18. Geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria for a length of at least eighteen inches in the vertical plane above the liquid surface. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

19. Secondary seal shall allow easy insertion of probes up to one and one-half (1-1/2) inches in width in order to measure gaps in the primary seal. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

20. Secondary seal shall extend from the roof of the tank to the shell and not be attached to the primary seal. [District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

21. Operator shall be exempt from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal. [40 CFR 60.112a(a)(1)(ii)(C)] Federally Enforceable Through Title V Permit

22. Each roof drain shall be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening. [40 CFR 60.112a(a)(1)(iv), District Rule 4623, 5.1.6] Federally Enforceable Through Title V Permit

23. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall provide a projection below the liquid surface. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 5.1] Federally Enforceable Through Title V Permit

24. All openings in the roof used for sampling and gauging except pressure-vacuum valves, which shall be set to within 10 percent of the maximum allowable working pressure of the roof, shall be equipped with a cover, seal or lid that shall be in a closed position at all times, with no visible gaps and be gas-tight, except when the device or appurtenance is in use. Gas-tight shall be defined as emitting no more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. Emissions in excess of this limit shall be considered a leak. [40 CFR 60.112a(a)(1)(iii), District Rule 4623, 6.1] Federally Enforceable Through Title V Permit

25. All covers, seals and lids covering openings in the roof used for sampling and gauging, except pressure-vacuum valves set to within 10 percent of the maximum allowable working pressure of the roof, shall be inspected annually by the facility operator to ensure compliance with the provisions of this permit. However, if one or more of the components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If none of the components of that type are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
26. A facility operator, upon detection of a leaking cover, seal, or lid, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. An operator shall reinspect a cover, seal, or lid for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Emissions from covers, seals, or lids which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting reinspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Any leak in a cover, seal, or lid shall be repaired to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. Automatic bleeder vents shall be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

33. Rim vents shall be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. [40 CFR 60.112a(a)(1)(iii)] Federally Enforceable Through Title V Permit

34. Operator shall perform gap measurements on primary seals within 60 days of the initial fill and at least once every 5 years thereafter. Operator shall perform gap measurements on secondary seals within 60 days of the initial fill with petroleum liquid and at least once every year thereafter. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill. [40 CFR 60.113a(a)(1)(i)(A), (B), and (C)] Federally Enforceable Through Title V Permit

35. If unit is out of service for a period of one year or more, subsequent refilling with petroleum liquid shall be considered initial fill in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(C)] Federally Enforceable Through Title V Permit

36. Operator shall determine gap widths in the primary and secondary seals using the following procedure: 1) Measure seal gaps, at one or more floating roof levels when the roof is floating off leg supports; 2) Measure seal gaps around the entire circumference of the tank in each place where a one-eighth (1/8) inch diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the tank wall and measure the circumferential distance of each such location; 3) Total surface area of each gap shall be determined by using probes of various widths to accurately measure the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance; 4) Add the gap surface area of each gap location for the primary seal and the secondary seal individually. Divide the sum for each seal by the nominal diameter of the tank. [40 CFR 60.113a(a)(1)(ii) and (iii)] Federally Enforceable Through Title V Permit
37. Operator shall record the vessel on which the measurement was performed, date of the seal gap measurement, and raw data obtained in the measurement process in accordance with the conditions of this permit. [40 CFR 60.113a(a)(1)(i)(D)] Federally Enforceable Through Title V Permit

38. Operator shall provide the APCO with 30 days notice of the gap measurement to afford the District the opportunity to have an observer present. [40 CFR 60.113a(a)(1)(iv)] Federally Enforceable Through Title V Permit

39. If the accumulated area of gaps or gap width exceed limits, operator shall submit a report to the District within 60 days of the date of measurement. Report should include identification of the vessel, reason vessel did not meet the specifications, and a description of the actions necessary to bring the storage vessel into compliance. [40 CFR 60.113a(a)(1)(i)(E)] Federally Enforceable Through Title V Permit

40. The primary seal envelope shall be made available for unobstructed inspection by the District personal on an annual basis at locations selected along its circumference at random by the District personal and minimum of four (4) locations shall be made available. If the District personal suspects a violation may exist, further unobstructed inspection of the primary seal as may be necessary to determine the seal condition for its entire circumference. [District Rule 4623, 5.1.4] Federally Enforceable Through Title V Permit

41. Operator shall keep a record of liquids stored in each container, period of storage, storage temperature, and both the Reid and maximum true vapor pressure of such liquids. [District Rule 4623, 6.1 and 40 CFR 60.115a(a)] Federally Enforceable Through Title V Permit

42. True vapor pressure shall be measured using Reid vapor pressure ASTM Method D323-82 modified by maintaining the hot water bath at storage temperature. Where storage temperature is above 100°F true vapor pressure shall be determined by Reid vapor pressure at 100°F and ARB approved calculations. [District Rule 4623, 6.2.2] Federally Enforceable Through Title V Permit

43. True vapor pressure of crude oil with an API (American Petroleum Institute) gravity less than 30 deg, as determined by API 2547, may be determined by Headspace Gas Chromatography using the procedures from ARB Evaluation of a Method for Determining Vapor Pressures of Petroleum Mixtures by Headspace Gas Chromatography, October 1990. [District Rule 4623, 6.2.3] Federally Enforceable Through Title V Permit

44. Maximum true vapor pressure may be determined from nomographs contained in API Bulletin 2517, by using the typical Reid vapor pressure and the maximum expected storage temperature of the stored product, unless the APCO specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s). [40 CFR 60.115a(b)] Federally Enforceable Through Title V Permit

45. Permittee shall maintain accurate daily records of the tank throughput and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vapor control system shall include vapor piping from free water knockouts, tanks S-1547-643 to '645, '647 to '649, & '652 to '654, with pressure relief vents (for emergency atmospheric release) located on the collection line. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vapor control system shall include vapor compressors with suction and discharge knockout vessels, serving tanks and vessels described above. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Vapor piping from free water knockouts may connect upstream or downstream of vapor compressors to accommodate operational needs. [District NSR Rule] Federally Enforceable Through Title V Permit

4. During power-switching events, no produced fluids shall be introduced into any tank at the Weir tank battery. All production into the tanks shall cease prior to shutting down the tank vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Each power-switching event shall not exceed 2 hours, and total annual hours of vapor control system shutdown during power-switching shall not exceed 96 hours. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Prior to disconnecting power from the TVR systems, during a power-switching event, AERA shall monitor the pressure in the shutdown TVR system to determine pressure relief valve(s) pressure settings are not exceeded. [District Rule 2201] Federally Enforceable Through Title V Permit

7. During power-switching events, there shall be no leaks (> 10,000 ppmv) from any vapor component in the TVR system. [District Rule 2201] Federally Enforceable Through Title V Permit

8. During power-switching events, permittee shall monitor TVR system piping and vapor components to ensure there are no leaks (> 10,000 ppmv). [District Rule 2201] Federally Enforceable Through Title V Permit

9. Vapor compressor(s) may be operated continuously or as required by demand. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting. [District Rule 2520] Federally Enforceable Through Title V Permit

11. Vapor control system pressure transmitters shall be inspected and maintained in good operating condition. The inspections shall be conducted on a quarterly basis. Replacing and repairing of each pressure transmitter shall not exceed one hour per day. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Vapor disposal shall be limited to injection into the formation. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Disposal of tank vapor by injection into the formation shall only be performed using DOGGR approved wells. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. VOC fugitive emissions from the components in gas service on the tank, FWKO vessels, tank vapor collection piping and vapor control system shall not exceed 12.9 lb-VOC/day (includes 0.46 lb/day, 0.46 lb-VOC/quarter for VRS sensor maintenance). [District NSR Rule] Federally Enforceable Through Title V Permit

15. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

16. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

17. VOC content of THC in collected vapors shall be sampled not less than annually. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Fixed roof tank shall be fully enclosed and shall be maintained in a gas-tight condition. The APCO-approved vapor control system consists of a closed vent system that collects all VOCs from the storage tank and vents them to DOGGR approved disposal well(s). The vapor control system shall be maintained in a gas-tight condition. Vapor control system shall reduce VOC emissions by at least 99% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

19. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

20. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

21. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

22. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

24. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

26. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
29. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

30. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

32. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

36. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

37. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit
Permit Unit Requirements for S-1547-643-18 (continued)


39. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

40. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. [District Rule 1070] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of DOGGR approved injection wells connected to this vapor control system, TVP of liquids stored in the tank, % VOC of THC in collected vapors, the date and duration of vapor control system maintenance operations, and all records of required monitoring data and support information. [District Rule 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

42. Permittee shall maintain records of date and duration of each power switching event. [District Rule 1070]

43. All records required by this permit shall be maintained and retained for a period of at least 5 years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT: S-1547-644-7
SECTION: SW22  TOWNSHIP: 31S  RANGE: 22E
EXPIRATION DATE: 05/31/2007
EQUIPMENT DESCRIPTION:
ONE 84,000 GALLON FIXED ROOF, 29.7 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL STOCK TANK T-420, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, & -652 TO -654 (WIER CDF)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 1.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 °F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit.

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.12 and 4623] Federally Enforceable Through Title V Permit.


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit.

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit.
PERMIT UNIT.requirements

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-647-7
EXPIRATION DATE: 05/31/2007
SECTION: SW22  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
ONE 210,000 GALLON FIXED ROOF, 38.6 FT. DIAMETER X 24 FT. HIGH, CRUDE OIL SURGE TANK T-460, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, & -652 TO -654 (WIER CDF)

PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable Through Title V Permit
2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit
7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit
8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 2.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit
10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit
11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit
12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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23. Operator shall maintain an inspection log containing the following:
   1) Type of component leaking;
   2) Date of leak detection, and method of detection;
   3) Date and emission level of recheck after leak is repaired;
   4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and
   5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2520, 13.2]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 2.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

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12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

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14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \sqrt{V/Q}}{} \), where \( t = \text{time}, V = \text{tank volume (cubic feet)}, \) and \( Q = \text{flow rate to the vapor control system as determined using appropriate engineering calculations.} \) [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
23. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

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4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

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15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

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18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000 ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule] Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \times V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall maintain an inspection log containing the following:
1) Type of component leaking;
2) Date of leak detection, and method of detection;
3) Date and emission level of recheck after leak is repaired;
4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and
5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Tank shall be vented to vapor control system listed on S-1547-643. [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all
   storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during periods of tank cleaning,
   inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V
   Permit

4. All tank gauges, hatches, sampling ports, pressure relief valves, vapor control system components, etc. shall be closed
   and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through
   Title V Permit

5. Tank seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition.
   [District NSR Rule] Federally Enforceable Through Title V Permit

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA
   Method 21. Emissions in excess of this is considered a leak. [District NSR Rule] Federally Enforceable Through Title V
   Permit

7. During power-switching events, no fluids shall be introduced into this tank and there shall be no leaks (> 10,000
   ppmv) from any TVR vapor piping or components. [District Rule 2201] Federally Enforceable Through Title V Permit

8. VOC fugitive emissions from the components in gas service on the tank shall not exceed 3.2 lb/day. [District NSR
   Rule] Federally Enforceable Through Title V Permit

9. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA
   Publication 453/R-95-017, Table 2-4, Oil and Gas Production Average Emission Factors. [District NSR Rule]
   Federally Enforceable Through Title V Permit

10. VOC content of hydrocarbons (VOC/THC) in collected vapors shall not exceed 25% by weight. [District NSR Rule]
    Federally Enforceable Through Title V Permit

11. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance
    activity. [District Rule 2080] Federally Enforceable Through Title V Permit

12. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as
    described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures
    as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
14. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed:
1) operate the vapor recovery system for at least 2 hours after all of the liquid in the tank has been drained, 2) displace vapors floating the oil pad off with water such that 90% of the tank liquid capacity is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q = \) flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Allowable methods of cleaning include using water, steam, diesel, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams/liter VOC content or less. Steam cleaning shall be allowed at locations where wastewater treatment facilities are limited or during December through March. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall re-inspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rules 2520, 9.3.2 and 4623] Federally Enforceable Through Title V Permit


26. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080]

28. The operator shall maintain records of TVP of liquids stored in the tank, % VOC of THC in collected vapors, and all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank vapors shall only vent to vapor collection system described on permit S-1547-442. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 2.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The tank and all piping, valves, and fittings shall be constructed and maintained in a leak-free condition. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

7. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

9. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit
10. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

13. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rules 2520, 9.3.2 and 4623, Table 3] Federally Enforceable Through Title V Permit

15. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The permittee shall maintain, and make available for District inspection, all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-842-1

SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
ONE 55,464 GALLON OILFIELD PRODUCTION SAND BASIN - BELRIDGE

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. Note: Formerly S-1511-273
PERMIT UNIT REQUIREMENTS

1. Water/VOC condensate from all liquid knockout vessels shall be piped to the production manifold or to an organic liquid storage tank that is served by the vapor recovery system. [District NSR Rule] Federally Enforceable Through Title V Permit

2. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank and the vapor recovery system shall not exceed 1.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. H2S concentration in tank vapor space shall not exceed 20,000 ppmv. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Compliance source testing for H2S concentration of tank vapor space shall be conducted annually (or as approved by the District). [District NSR Rule] Federally Enforceable Through Title V Permit

6. H2S concentration in tank vapor space shall be determined by: GC/FPD or ASTM D-3246. [District Rule 1081] Federally Enforceable Through Title V Permit

7. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

8. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

9. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

11. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

12. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

14. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be constructed and maintained in a gas tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Tank gauging, thief hatches and/or sampling devices shall be equipped with gas tight covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Tank pressure relief valve(s) shall be closed and gas-tight during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

19. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

20. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

30. Permittee shall maintain monthly records of true vapor pressure (TVP) of liquids stored and H2S concentration of tank vapor space. [District NSR Rule and District Rule 4623] Federally Enforceable Through Title V Permit

31. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit
32. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-282.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-283.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-284.
San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-1547-846-5  EXPIRATION DATE: 05/31/2007
SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W
EQUIPMENT DESCRIPTION:
126,000 GAL 30' DIA. FIXED ROOF PRODUCED WATER TANK (#F201A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1) Zero air (less than 10 ppm of hydrocarbon in air); and 2) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit


These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-847-5  
EXPIRATION DATE: 05/31/2007

SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
126,000 GAL 30' DIA. FIXED ROOF PRODUCED WATER TANK (#F201B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory “test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph”, as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-286.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-848-5
EXPIRATION DATE: 05/31/2007

SECTION: NE35 TOWNSHIP: 12N RANGE: 24W

EQUIPMENT DESCRIPTION:
126,000 GALLON 40’ DIA. FIXED ROOF RECLAIM OIL TANK (#F401B) SERVED BY A VAPOR RECOVERY SYSTEM
(VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
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22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-287.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-849-5 
EXPIRATION DATE: 05/31/2007

SECTION: NE35 
TOWNSHIP: 12N 
RANGE: 24W

EQUIPMENT DESCRIPTION:
126,000 GALLON 30' DIA. FIXED ROOF REJECT OIL TANK (F301A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-288:
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-850-5
EXPIRATION DATE: 05/31/2007

SECTION: NE35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
126,000 GALLON 30' DIA. FIXED ROOF REJECT OIL TANK (#F301B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '-853, '-882, '-883, '-884, '-1005 TO '-1011, AND '-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-289.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit
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10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

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14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-290.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-852-5
EXPIRATION DATE: 05/31/2007

SECTION: NE35   TOWNSHIP: 12N   RANGE: 24W

EQUIPMENT DESCRIPTION:
210,000 GALLON, 40’ DIA. FIXED ROOF LACT OIL TANK (#F101B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO ’-853, ’-882, ’-883, ’-884, ’-1005 TO ’-1011, AND ’-1025) - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-291.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

4. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

5. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

6. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

7. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

9. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

10. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

12. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

16. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AER ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
8-1547-853-5: Jul 7 2071 11:27AM - GOUGHD

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

25. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

27. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Note: Formerly S-1511-292.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-854-13
EXPIRATION DATE: 05/31/2007
SECTION: SE19 TOWNSHIP: 26S RANGE: 21E
EQUIPMENT DESCRIPTION:
126,000 GALLON (3,000 BBL) FIXED ROOF REJECT OIL TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1547-854 TO '863, '990, '991, '992, '-1152, '-1159, AND '-1160 INCLUDING VAPOR COMPRESSORS, COMPRESSOR RECYCLE COOLER, LIQUID KNOCKOUT VESSELS (INCLUDING FWKO #D-101A), AND PIPING TO SULFUR REMOVAL SYSTEM S-1547-714 (LOST HILLS)

PERMIT UNIT REQUIREMENTS

1. Vapor control system compressor shall activate before the tank internal pressure exceeds relief valve settings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vapor control system shall be shared between units S-1547-854 through '863, '990 through '992, '-1152, '-1159 and '-1160. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank and knockout vessels shall be designed and maintained to vent only to vapor control system, except during periods of tank or knockout vessel cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Vapor control system shall vent only to sulfur removal system S-1547-714 during normal operations. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

6. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

7. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

8. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 71.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

11. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

13. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE,KERN COUNTY, CA
S-1547-854-13: Sep 7 2011 11:12AM - GOUCHO
21. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Permitee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power curtailment. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 4.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 4.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit


These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 4.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

Permit Unit: S-1547-858-5
Expiration Date: 05/31/2007

Section: SE19  Township: 26S  Range: 21E

Equipment Description:
63,000 Gallon (1500 BBL) 22' Dia. Cone Bottom Constant Level Clarifier Tank Vented to Shared Vapor Control System Listed on S-1547-854 (Lost Hills)

Permit Unit Requirements

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS

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4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 2.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
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12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
19. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Tank shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District Rule 4623] Federally Enforceable Through Title V Permit

3. Tank cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 2.1 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

8. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit
10. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

18. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
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20. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Unit cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

5. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

7. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit


These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be designed and maintained to vent only to vapor control system listed on PTO S-1547-854, except during periods of tank cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Unit cleaning shall not exceed 96 hours per year. [District NSR Rule] Federally Enforceable Through Title V Permit

3. The vapor control system shall be operated at all times except during power outages and approved maintenance activities not to exceed 240 cumulative hours per calendar year. Approved maintenance activities include vapor control system maintenance and cleaning and/or maintenance of the clarifier tank at the Lost Hills 2 Water Plant. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Total VOC emissions rate from vapor control system components associated with this emission unit shall not exceed 5.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

5. During periods of vapor control system maintenance activities and power outages, vapor control system shall operate as a vapor balance system with operational pressure/vacuum relief valves preventing loss to the atmosphere except for fugitive leaks. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

7. A leak is defined as an emissions rate exceeding 10,000 ppm of methane measured at a distance of one centimeter from potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Any tank gauging or sampling device or other roof appurtenance on a tank vented to the vapor recovery system shall be equipped with a cover, which shall be closed at all times except during gauging, sampling, tank or knockout vessel cleaning or when repairing or performing maintenance on a sampling or gauging device or other roof appurtenance. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. All piping, fittings, valves, gauging and sampling devices and roof appurtenances comprising the vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

16. Permittee shall maintain accurate records of vapor control system maintenance, power outages and records of hours of tank and knockout vessel cleaning. Such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

17. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

18. Note: Formerly S-1511-331.
PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District NSR Rule] Federally Enforceable Through Title V Permit

3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC emissions shall not exceed the following 13.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The sand basin surface area shall not exceed 2,300 sq.ft. [District NSR Rule] Federally Enforceable Through Title V Permit

6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

7. Note: Formerly S-1511-332

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vapor control system listed on this permit shall be connected to the following units: S-1547-865 through '-877, '-994, '-995, '-998 through '-1001, and '-1016 through '-1018. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor control system shall include compressors, recycle coolers, knockout vessels, and piping to DOGGR approved gas disposal well(s). [District Rule 2201] Federally Enforceable Through Title V Permit

3. Vapor control efficiency shall be maintained at no less than 99% during normal operation. [District Rule 2201] Federally Enforceable Through Title V Permit

4. During periods of voluntary demand reduction power outages, vapor control system shall operate through the use of an operational pressure/vacuum (pv) vent and a vapor balanced system. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Uncondensed vapors from vapor compressor(s) shall only be piped to DOGGR approved gas disposal wells. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain a current listing of all DOGGR approved gas disposal wells connected to this vapor control system, and such listing shall be made readily available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Water and volatile organic compound (VOC) condensate from all liquid knockout drums shall be pumped to production system. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. Operator shall monitor vapor control system pressures on a quarterly basis to ensure that system pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. Vapor control system pressure transmitters shall be inspected and maintained in good operating conditions. The inspections shall be conducted on a quarterly basis. Replacing and repairing of each pressure transmitters shall not exceed one hour per day. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Tank shall be vented only to vapor control system described on permit S-1547-865. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

15. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit

16. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

17. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

20. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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22. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) minimize the leak within 15 calendar days; and 2) if the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Operator shall maintain an inspection log containing the following 1) type of component leaking; 2) date of leak detection, and method of detection; 3) date and emission level of recheck after leak is repaired; 4) identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
24. Vapor control system efficiency shall be determined by a comparison of controlled emissions from all associated emissions units to those emissions which would occur from associated emissions units in the same product service without a vapor control system. Emissions shall be based on emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device. [District Rule 2201] Federally Enforceable Through Title V Permit

25. Tank pressure/vacuum valve shall be inspected on an annual basis. During the pv valve inspections, the pv valve can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of pv valve. [District Rule 2080] Federally Enforceable Through Title V Permit

26. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

27. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

28. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

29. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

30. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

31. Steam cleaning shall be allowed only during December through March except at a location where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

32. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

33. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

35. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

Facility Name: AERIA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

37. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 26.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

38. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District Rule 2201] Federally Enforceable Through Title V Permit

39. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District Rule 2201] Federally Enforceable Through Title V Permit

40. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

41. Permittee shall maintain records of vapor control skid maintenance and voluntary power demand reduction situations, and such records shall be made available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t = \) time, \( V = \) tank volume (cubic feet), and \( Q = \) flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 °F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
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22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

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8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

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17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302°F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-868.1: Jul 7 2011 1:30PM - GOOGGRID
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-869-5
EXPIRATION DATE: 05/31/2007

SECTION: NE14 TOWNSHIP: 31S RANGE: 22E

EQUIPMENT DESCRIPTION:
210,000 GALLON FIXED ROOF LACT TANK (F-105) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-4531R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-870-4
EXPIRATION DATE: 05/31/2007
SECTION: NE14 TOWNSHIP: 31S RANGE: 22E
EQUIPMENT DESCRIPTION:
210,000 GALLON FIXED ROOF LACT TANK (F205) SERVED BY VAPOR CONTROL SYSTEM S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit
5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-871-5
EXPIRATION DATE: 05/31/2007

SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
126,000 GALLON FIXED ROOF RECLAIM OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865
- NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
S-1547-871-5: JUL 7 2011  2:33PM - GOUGH
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) Vent the tank to the vapor control system for a length of time determined by the following relationship: \[t = 2.3 \frac{V}{Q}\], where \(t\) = time, \(V\) = tank volume (cubic feet), and \(Q\) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.7 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

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San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-873-4
EXPIRATION DATE: 05/31/2007

SECTION: NE14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
210,000 GALLON FIXED ROOF RECLAIM OIL TANK (F204) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)

PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit
5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
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11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

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14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: t = 2.3 V/Q, where t = time, V = tank volume (cubic feet), and Q= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
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23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 4.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

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28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

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PERMIT UNIT REQUIREMENTS

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27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppm whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080]
21. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the procedure used to vent tank vapors prior to opening, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 0.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Flotation unit shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Flotation unit shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Flotation unit shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the vessel to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \), where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 3.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-4531R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Flotation unit shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Flotation unit shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Flotation unit shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the vessel to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3 \times V}{Q} \] where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 4.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be operated with a constant liquid level. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017 for Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline shall not exceed 14.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the floatation unit shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the floatation unit and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

4. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background from components other than those associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

7. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

8. All piping, fittings, and valves shall be constructed and maintained in a gas tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Floatation unit covers, inspection hatches, etc., shall be closed and maintained gas-tight during normal operation except during periods of maintenance, repair, cleaning or power curtailment. [District NSR Rule] Federally Enforceable Through Title V Permit

10. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall determine the presence of VOC leaks by EPA Method 21. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. During tank cleaning and maintenance, only one tank shall be vented to the atmosphere at any given time. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c, Oil and Gas Production Screening Value Ranges Emission Factors (Feb 1999), from the total number of components from this tank shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. H2S concentration in tank vapor space shall not exceed 20,000 ppmv. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Compliance source testing for H2S concentration of tank vapor space shall be conducted annually (or as approved by the District). [District NSR Rule] Federally Enforceable Through Title V Permit

5. H2S concentration in tank vapor space shall be determined by: GC/FPD or ASTM D-3246. [District Rule 1081] Federally Enforceable Through Title V Permit

6. This tank shall only store, place, or hold an organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

7. Permittee shall conduct True Vapor Pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 4623] Federally Enforceable Through Title V Permit

8. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623, 6.4.4] Federally Enforceable Through Title V Permit

9. For other organic liquids, the true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance of the oil and gas section of "California Air Resources Boards (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588", dated August 1989. As an alternative to using ASTM D 323, the TVP of crude oil with an API gravity range of greater than 26 degrees up to 30 degrees may be determined by using other equivalent test methods approved by APCO, ARB and EPA. [District Rule 4623, 6.4.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the storage tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a leak-free condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

11. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

12. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

14. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

15. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Tank gauging, thief hatches and/or sampling devices shall be equipped with leak-free covers which shall remain closed at all times except during gauging and sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Tank pressure relief valve(s) shall be closed and leak-free during normal operation. Tank pressure relief valve(s) may open when the vapor collection system is shutdown for maintenance, involuntary power disruptions or your power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

18. The tank pressure relief valve(s) shall be set to within 10% of the maximum allowable working pressure of the tank. [District NSR Rule] Federally Enforceable Through Title V Permit

19. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. Operator shall determine the presence of VOC leaks by EPA Method 21. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 using the following calibration gases; 1.) Zero air (less than 10 ppm of hydrocarbon in air); and 2.) A mixture of methane or n-hexane and air at a concentration of about, but less than, 10,000 ppm methane or n-hexane. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
23. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

25. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

26. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

29. Permittee shall maintain monthly records of true vapor pressure (TVP) of liquids stored and H2S concentration of tank vapor space. [District NSR Rule and District Rule 4623] Federally Enforceable Through Title V Permit

30. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rules 2520, 9.4.2 and 4623] Federally Enforceable Through Title V Permit

31. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

33. Note: Formerly S-1511-376.
PERMIT UNIT REQUIREMENTS

1. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rules 2080 and 4623]

2. Permittee shall conduct tank cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rules 2080 and 4623]

3. Tank may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rules 2080 and 4623]

4. Permittee shall notify the District Compliance division at least 24 hours before tank cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rules 2080 and 4623]

5. Prior to opening the tank to allow tank cleaning one of the following procedures must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the tank has been drained, 2) displace vapors floating on the oil pad off with water such that 90% of the tank volume is displaced, 3) vent the tank to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 V}{Q} \)

6. The tank shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment shall be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rules 2080 and 4623]

7. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rules 2080 and 4623]

8. Prior to reintroducing crude oil/water to the tank, the vapor recovery system shall be operational. The tank may be filled with water to minimize the tank headspace prior to restarting the vapor recovery system. [District Rules 2080 and 4623]

9. Within 48 hours after refilling the tank with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rules 2080 and 4623]
10. Permittee shall maintain records of each period of cleaning and maintenance when the tank is disconnected or isolated from the vapor control system. Records shall include the date that tank cleaning was initiated, the date tank cleaning was completed, the method of tank cleaning used, and a description of internal and external tank repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2080 and 4623]

11. The following Dehy 2 permit units shall be tied into the shared vapor recovery system, TEOR S-1547-359: '-888, '-889, '-890, '-891, '-892, '-893, '-894, '-895, '-896, '-897, '-898, '-899, '-902, '-903, '-904, '-905, '-906, '-944, '-945, '-946, '-947, '-948, '-949, '-950, '-951, '-1014, '-1015, '-1019, '-1116, '-1117, '-1119, '-1123, and '-1124. [District Rule 2201] Federally Enforceable Through Title V Permit

12. This vapor recovery system is authorized to receive recovered gas from the Anderson/Fitzgerald Dehydration facility including units S-1547-378, '-379, '-380, '-383, '-407, '-408, '-410, '-411, '-704, '-1100, '-1101, '-1102, '-1106, '-1115, and '-1121. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. VOC fugitive emissions from this tank and tank vapor control system including vapor control system trunk line prior to intertie with TEOR S-1547-359 shall not exceed 96.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Permittee shall maintain with the permit accurate fugitive component counts for tank and tank vapor control system, including vapor control system trunk line, according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

16. The tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

17. The operator shall keep accurate records of types, storage temperature and true vapor pressure of liquids stored. [District Rule 4623] Federally Enforceable Through Title V Permit

18. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the storage tank and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rules 2201 & 4623, 5.6.1] Federally Enforceable Through Title V Permit

19. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during interior tank cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

20. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit

21. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623, 3.9 and 6.4.8] Federally Enforceable Through Title V Permit

22. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

23. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
25. Upon detection of any leaking components (having a gas leak >10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7.9 (Table 3)] Federally Enforceable Through Title V Permit

26. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of this permit or District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

28. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)]

29. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

31. Control efficiency shall be determined by a comparison of controlled emissions to those emissions which would occur from a fixed or cone roof tank in the same product service without a vapor recovery system. Emissions shall be determined based on tank emission factors in EPA Publication AP-42, component counts for fugitive emissions sources, recognized emission factors for fugitive emission sources and the efficiency of any VOC destruction device as measured by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case Method 25a may be used, and analysis of halogenated exempt compounds shall be analyzed by EPA Method 18 or ARB Method 422 Determination of Volatile Organic Compounds in Emission from Stationary Sources. [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

32. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

33. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1511-398.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

2. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia, or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
7. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

8. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

9. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

10. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

11. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

12. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

13. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Tank shall vent to vapor collection system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Vapor collection and vapor control systems shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

17. Any tank gauging or sampling device on a tank vented to the vapor collection system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

18. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

20. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

21. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

22. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

27. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

28. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor collection system compressor activation and shut off pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief setting(s). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Note: Formerly S-1511-399.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-892-9
EXPIRATION DATE: 05/31/2007
SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4001 VENTED TO SHARED VAPOR CONTROL SYSTEM
LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE

PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 8.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-409

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 7.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-410

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 6.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-411

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor control system shall not exceed 6.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-412
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 7.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-413

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-414

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 22.3 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-415

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 12.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count for the vapor recovery system and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-416

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained gas-tight, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 6.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

8. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

9. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

11. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

12. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Note: Formerly S-1511-424 Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained gas-tight, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. An operational flow check valve shall be operational downstream of the IFS dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

5. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 12.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, induced static floatation cell shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Any induced static floatation cell gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
12. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. A facility operator, upon detection of a leaking component, shall affix to that component a waterproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Note: Formerly S-1511-425

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained gas-tight, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. An operational flow check valve shall be operational downstream of the IFS dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

5. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 11.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, induced static floatation cell shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Any induced static floatation cell gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Note: Formerly S-1511-426

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vessel and all vessel appurtenances shall be maintained gas-tight, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

4. An operational flow check valve shall be operational downstream of the IFS dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

5. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.9 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

6. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, induced static floatation cell shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

8. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

9. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

10. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Any induced static floatation cell gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Note: Formerly S-1511-427

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-906-9
SECTIONS: SW02  TOWNSHIP: 29S  RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
13.5 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4007 VENTED TO SHARED VAPOR CONTROL SYSTEM
LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE

PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit
2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit
3. An operational flow check valve shall be operational downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor collection and control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit
5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit
6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 14.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Permittee shall maintain an accurate fugitive component count for the vapor recovery system and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Except as otherwise provided in this permit, FWKO shall be maintained leak free. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit
9. Except as otherwise provided in this permit, all piping, valves, and fittings shall be constructed and maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit
10. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit
11. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
13. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

20. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

21. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

22. Note: Formerly S-1511-431
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-907-4
EXPIRATION DATE: 05/31/2007

SECTION: 35  TOWNSHIP: 12N  RANGE: 24W

EQUIPMENT DESCRIPTION:
138,900 GALLON SAND BASIN, LONGITUDINALLY DIVIDED INTO TWO CELLS, TOTAL LIQUID HOLDING AREA NOT TO EXCEED 72 FT. BY 46 FT., WITH DEWATERING EQUIPMENT, AND MISC. ELECTRIC PUMPS, TOTAL RATING LESS THAN 100 HP. - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Basin shall be used solely for separation of solids from liquids derived from Aera's Heavy Oil Western Stationary Source during normal operations. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Emissions shall not exceed the following: VOC - 19.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Sand basin shall not operate as a sump as defined by Rule 4402. [District NSR Rule and District Rule 4402] Federally Enforceable Through Title V Permit
4. Note: Formerly S-1511-432

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-949-9
EXPIRATION DATE: 05/31/2007
SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
210,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4301 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

2. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

8. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

9. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

10. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

11. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

12. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

13. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 10.4 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

18. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

20. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

21. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

22. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

29. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-509.
PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

2. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

8. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

9. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

10. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

11. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

12. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

13. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 5.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

18. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

20. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

21. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

22. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
23. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

29. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-510.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-951-9
EXPIRATION DATE: 05/31/2007

SECTION: SW02  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
210,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4303 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

2. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
7. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

8. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

9. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

10. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

11. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

12. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

13. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

18. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

20. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

21. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

22. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

29. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-511.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1511-551

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

2. Tank degassing shall be accomplished by emptying the tank of organic liquid having a TVP of 0.5 psia or greater, and minimizing organic vapors in the tank vapor space by one of the following methods: 1) tank shall be degassed before commencing interior cleaning by exhausting VOCs contained in the tank vapor space to an APCO-approved vapor recovery system until the organic vapor concentration is 5,000 ppmv or less, or is 10 percent or less of the lower explosion limit (LEL), whichever is less; or 2) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable liquid until 90 percent or more of the maximum operating level of the tank is filled. Suitable liquids are organic liquids having a TVP of less than 0.5 psia, water, clean produced water, or produced water derived from crude oil having a TVP less than 0.5 psia; or 3) tank shall be degassed before commencing interior cleaning by displacing VOCs contained in the tank vapor space to an APCO-approved vapor recovery system by filling the tank with a suitable gas. Degassing shall continue until the operator has achieved a vapor displacement equivalent to at least 2.3 times the tank capacity. Suitable gases are air, nitrogen, carbon dioxide, or natural gas containing less than 10 percent VOC by weight; or 4) for free-water knockout tanks only, tank shall be degassed by restricting the outflow of water and floating off the oilpad, such that at least 90 percent of the tank volume is displaced. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
7. While performing tank cleaning activities, operators may only use the following cleaning agents: diesel, solvents with an initial boiling point of greater than 302 degrees F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams of VOC per liter or less. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

8. Steam cleaning shall only be allowed at locations where wastewater treatment facilities are limited, or during the months of December through March. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

9. When storing an organic liquid that has a TVP that is 1.5 psia or higher, during sludge removal the operator shall control emissions from the sludge receiving vessel by operating an APCO-approved vapor control device that reduces emissions of organic vapors by at least 95%. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

10. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall only transport removed sludge in closed, liquid leak-free containers. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

11. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

12. Operator shall maintain a record of all tank cleaning activities. The records should include the final details of the planned activities submitted along with the tank cleaning notification requirements specified within this permit. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

13. Drain valves shall only drain into covered containers which shall be emptied into tanks with vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

14. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 8.1 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Tank shall vent to vapor control system listed in S-1547-888, except during periods of tank interior cleaning. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

18. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623] Federally Enforceable Through Title V Permit

19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit

20. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit

21. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

22. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
23. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

29. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-659

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. When storing organic liquid that has a TVP that is 0.5 psia or greater, the permittee shall notify the APCO in writing at least three (3) days prior to performing tank degassing and interior tank cleaning activities. Written notification shall include the following: 1) the Permit to Operate number and physical location of the tank being degassed, 2) the date and time that tank degassing and cleaning activities will begin, 3) the degassing method, as allowed in this permit, to be used, 4) the method to be used to clean the tank, including any solvents to be used, and 5) the method to be used to dispose of any removed sludge, including methods that will be used to control emissions from the receiving vessel and emissions during transport. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

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3. During tank degassing, the operator shall discharge or displace organic vapors contained in the tank vapor space to an APCO-approved vapor recovery system. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

4. To facilitate connection to an external APCO-approved recovery system, a suitable tank fitting, such as a manway, may be temporarily removed for a period of time not to exceed 1 hour. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

5. This tank shall be in compliance with the applicable requirements of District Rule 4623 at all times during draining, degassing, and refilling the tank with an organic liquid having a TVP of 0.5 psia or greater. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

6. After a tank has been degassed pursuant to the requirements of this permit, vapor control requirements are not applicable until an organic liquid having a TVP of 0.5 psia or greater is placed, held, or stored in this tank. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit

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11. When storing an organic liquid that has a TVP that is 1.5 psia or higher, permittee shall store removed sludge, until final disposal, in vapor leak-free containers, or in tanks complying with the vapor control requirements of District Rule 4623. Sludge that is to be used to manufacture roadmix, as defined in District Rule 2020, is not required to be stored in this manner. Roadmix manufacturing operations exempt pursuant to District Rule 2020 shall maintain documentation of their compliance with Rule 2020, and shall readily make said documentation available for District inspection upon request. [District Rule 4623, 5.7.5] Federally Enforceable Through Title V Permit
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19. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623, 5.6.2] Federally Enforceable Through Title V Permit
20. All tank seams, joints, piping, valves and fittings shall be constructed and maintained in a gas-tight condition except during tank interior cleaning. [District Rule 4623, 5.6.3] Federally Enforceable Through Title V Permit
21. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit
22. If any of the tank components are found to be leaking, operator shall immediately affix a tag and maintain records of gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Upon detection of any leaking components (having a gas leak > 10,000 ppmv, measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane) operator shall: (a) Eliminate or minimize the leak within 8 hours after detection. (b) If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and eliminate the leak within 48 hours after detection. (c) In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

24. Leaking tank components affixed to the tank or within five feet of the tank that have been discovered by the operator and that have been immediately tagged and repaired within the specified deadlines, shall not constitute a violation of the District Rule 4623. However, leaking components discovered during inspections by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within specified deadlines, shall constitute a violation of SJVUAPCD Rule 4623. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

25. If a component type for a given tank is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

26. Any component found to be leaking on two consecutive annual inspections is in violation of SJVUAPCD Rule 4623, even if it is under the voluntary inspection and maintenance program. [District Rule 4623, 5.7 (Table 3)] Federally Enforceable Through Title V Permit

27. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. The control efficiency of the VOC construction device, measured and calculated as carbon, shall be determined by US EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case US EPA Method 25a may be used. US EPA Method 18 may be used in lieu of US EPA Method 25 or US EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of the known analytes/compounds to ensure that the VOC concentrations are neither under-reported or over-reported. Analysis of halogenated exempt compounds shall be analyzed by ARB Method 422 "Exempt Halogenated VOCs in Gases September 12, 1990". [District Rule 4623, 6.4.6, 6.4.7] Federally Enforceable Through Title V Permit

29. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

30. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-660.
PERMIT UNIT REQUIREMENTS

1. FWKO vessel shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit
2. FWKO vessel shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit
3. FWKO vessel shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit
4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit
5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = \frac{2.3 V}{Q}$, where $t = \text{time}$, $V = \text{tank volume (cubic feet)}$, and $Q = \text{flow rate to the vapor control system as determined using appropriate engineering calculations.}$ [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in collected FWKO vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. FWKO vessel shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

2. FWKO vessel shall be designed and maintained to vent only to vapor control system, except during periods of cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

3. FWKO vessel shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

13. This permit authorizes cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

14. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: \[ t = \frac{2.3 \times V}{Q} \] where \( t \) = time, \( V \) = tank volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

17. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
21. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

22. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


24. VOC fugitive emissions from this vessel shall not exceed 0.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

25. VOC content of hydrocarbons in collected FWKO vessel vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain with the permit accurate fugitive component counts for this vessel and the associated tank vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

27. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Tank shall be equipped with a fixed roof with no holes or openings. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Tank shall be vented only to vapor control system described on permit S-1547-865. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Tank shall be designed and maintained to vent only to vapor control system, except during the period of tank cleaning, inspections, and maintenance allowed by this permit. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) less than 0.50 psia under all storage conditions. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All gauge hatches, sampling ports, pressure relief valves, vapor control system components, etc., shall be closed and gas-tight except during sampling or attended maintenance. [District NSR Rule] Federally Enforceable Through Title V Permit

6. All seams, welds, joints, piping, valves, and fittings shall be inspected and maintained in a gas-tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Tank pressure/vacuum valve (Varec) shall be inspected on an annual basis. During the varec inspections, the varec can be removed from the tank and replaced if necessary. The permittee shall minimize emissions from the opening by plugging the opening during the removal of varec valve. [District Rule 2080] Federally Enforceable Through Title V Permit

15. This permit authorizes tank cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Permittee shall conduct cleaning and maintenance operations in accordance with District approved procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Vessel may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the tank to allow tank cleaning, one of the following procedures must be followed: 1) Prior to venting the tank to the atmosphere, operate the tank vapor recovery system/vapor control device for at least 2 hours such that it collects the tank vapors; or 2) use liquid displacement, conducted using a liquid with a TVP less than 0.5 psia, or conducted by floating the oil pad off a crude oil tank by restricting the outflow of water, such that 90% of the tank volume is displaced; or 3) Vent the tank to a vapor control device/vapor recovery system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the tank to the vapor control system for a length of time determined by the following relationship: $t = \frac{2.3 V}{Q}$, where $t$ = time, $V$ = tank volume (cubic feet), and $Q$= flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

19. The vessel shall be cleaned using one of the following methods: water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. The tank sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

20. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of each period of cleaning and maintenance when the vessel is disconnected or isolated from the vapor control system. Records shall include the date that vessel cleaning was initiated, the date cleaning was completed, the procedure used to vent vapors prior to opening, the method of cleaning used, and a description of internal and external repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Permittee shall maintain accurate records of the TVP of liquids stored and such records shall be made readily available for District inspection at any time for a period of five years. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

23. Permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

24. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "Test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit


26. VOC fugitive emissions from the tank and gas components serving the tank battery shall not exceed 3.9 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

27. VOC content of hydrocarbons in tank vapors (VOC/THC) shall not exceed 25%. Permittee shall maintain a written record of VOC content (sampled not less than annually) and shall make such records available for District inspection upon request for a period of five years. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Permittee shall maintain with the permit accurate fugitive component counts for this tank and the vapor control system and resulting emissions calculated using Oil and Gas Production Operations Average Emission Factors, U.S. EPA Protocol for Equipment Leak Emission Estimates, Table 2-4 (EPA-453/R-95-017) November 1995. [District NSR Rule] Federally Enforceable Through Title V Permit

29. This unit has a storage capacity less than 420,000 gallons and is used for petroleum or condensate stored, processed and/or treated at a drilling and production facility prior to custody transfer. Therefore, the requirements of 40CFR 60 Subpart K, Ka and Kb do not apply to this source. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained gas-tight, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. The vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the ISF dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. During periods of vapor control system maintenance and power outages, vapor control system shall operate with a minimum efficiency of 90%, achieved through the use of an operational pressure/vacuum vent and a vapor balanced system. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 17.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any induced static floatation cell gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, re-inspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control system is functional and is operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

20. Note: Formerly S-1511-671

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Floatation unit shall be operated with a constant liquid level. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Fugitive VOC emissions rate, calculated using Table 2-4 Oil and Gas Production Operations Average Emissions factors from the EPA Protocol for Equipment Leak Emissions Estimates EPA-453/R-95-017 for Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline shall not exceed 14.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Except during periods of maintenance, involuntary power curtailments and the voluntary power demand reduction program, the floatation unit shall be equipped with a vapor recovery system consisting of a closed vent system that collects all VOCs from the floatation unit and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in a gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99%, by weight, as determined by the test method specified in Section 6.4.7 of District Rule 4623. [District NSR Rule] Federally Enforceable Through Title V Permit

4. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background from components other than those associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline is a violation of this permit and shall be reported as a deviation. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The vapor collection system can be shutdown for maintenance or involuntary power curtailments for a combined total of no more than 24 hours per calendar quarter. Involuntary power curtailments shall be defined as power disruptions that are caused solely by the power distributor and shall also include any time necessary to switch back and forth between power providers. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The vapor collection system can be shutdown as a part of the voluntary power demand reduction program for no more than 5 hours per day, 5 days per year between the dates of May 1 and October 31. [District NSR Rule] Federally Enforceable Through Title V Permit

7. The vapor control system shall operate with a minimum control efficiency of 90% when the vapor collection system is shutdown down for maintenance, involuntary power curtailments or the voluntary power demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

8. All piping, fittings, and valves shall be constructed and maintained in a gas tight condition. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
9. Floatation unit covers, inspection hatches, etc., shall be closed and maintained gas-tight during normal operation except during periods of maintenance, repair, cleaning or power curtailment. [District NSR Rule] Federally Enforceable Through Title V Permit

10. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired upon detection. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall determine the presence of VOC leaks by EPA Method 21. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components associated with the Wemco, new 10" diameter main vapor collection pipeline, and four 4" diameter vapor recovery lines (one on each cell) connecting the Wemco to the main vapor collection pipeline which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 99% efficient as measured by EPA Method 18 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 99% control efficiency as measured by EPA Method 18 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shutdown for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shutdown. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on a quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
19. Permittee shall maintain records of number and type of components installed and calculated fugitive emissions. Permittee shall update such records when new components are installed. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Permittee shall maintain accurate records of the amount of time the vapor collection system is shutdown for maintenance, involuntary power curtailments and the voluntary power demand reduction program and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1027-4

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
3. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
4. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacturer's listed scrubbing efficiency. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
5. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
6. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
7. Tank shall vent all HCl fumes to operational fume scrubber at all times during filling. [District Rule 4102]
8. Deliveries shall not exceed 15,000 gallons of hydrochloric acid per day. [District Rule 4102]
9. Tank throughput shall not exceed 1,800,000 gallons per year of HCl. [District Rule 4102]
10. Permittee personnel shall be present during all acid deliveries to verify storage tank has sufficient outage to receive the volume of acid to be delivered, that all acid unloading connections are secured, and that the unloading air pressure does not exceed 25 psig. [District Rule 4102]
11. Permittee shall keep records of maintenance inspections, acid delivery dates and volumes delivered. All records shall be retained for a minimum of five years. Records shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
12. Formerly permit unit #S-1511-680.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-170

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1043-1
EXPIRATION DATE: 05/31/2007
SECTION: NE34  TOWNSHIP: 29S  RANGE: 21E
EQUIPMENT DESCRIPTION:
42,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK #CY34WT1.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-167

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-168

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1045-1
EXPIRATION DATE: 05/31/2007

SECTION: NE34  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
42,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK.

PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

5. Note: Formerly S-1129-169

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. True vapor pressure of any liquid placed, stored, or held in the tank shall not exceed 0.5 psia at storage temperature. [District Rule 4623, 2.0] Federally Enforceable Through Title V Permit

2. True vapor pressure shall be measured at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored using the latest version of the Lawrence Berkeley National Laboratory Test Method for Vapor Pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph, as approved by ARB and EPA. In lieu of testing each uncontrolled fixed roof tank, operator may conduct a TVP testing of a representative tank provided that a representative testing plan (meeting the requirements of sections 6.2.1.1.1 through 6.2.1.1.5 of District Rule 4623) received and approved by APCO. [District Rule 4623, 6.2.2, 6.4.4] Federally Enforceable Through Title V Permit

3. Operator shall submit the records of TVP testing to the District within 45 days after the date of testing. The record shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6] Federally Enforceable Through Title V Permit

4. Operator shall keep accurate records of each liquid stored in the tank including its storage temperature, true vapor pressure (TVP) and API gravity make such records readily available for district inspection upon request. [District Rule 4623, 6.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. Vessel shall vent only to vapor control system listed in S-1547-704. [District Rule 2201]

2. FWKO covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201]

3. FWKO vessel cleaning shall not exceed once per calendar quarter and records (time & date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2201]

4. Fugitive VOC emission rate shall not exceed 5.6 lb/day. [District Rule 2201]

5. Permittee shall maintain with the permit accurate fugitive component counts for equipment according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA-453/R-95-017. [District Rule 2201]

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2]

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070]
PERMIT UNIT REQUIREMENTS

1. Vessel shall vent only to vapor control system listed in S-1547-704. [District Rule 2201]
2. FWKO covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201]
3. FWKO vessel cleaning shall not exceed once per calendar quarter and records (time & date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2201]
4. Fugitive VOC emission rate shall not exceed 5.4 lb/day. [District Rule 2201]
5. Permittee shall maintain with the permit accurate fugitive component counts for equipment according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]
6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit
7. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

S-1547-1101-6: Aug 5 2011 2:38 AM - DDDDD
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Vessel shall vent only to vapor control system listed in S-1547-704. [District Rule 2201]

2. FWKO covers, inspection hatches, etc. shall be maintained in gas-tight (as defined in Rule 4623) condition except during vessel cleaning, repair and maintenance. [District Rule 2201]

3. FWKO vessel cleaning shall not exceed once per calendar quarter and records (time & date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2201]

4. Fugitive VOC emission rate shall not exceed 5.8 lb/day. [District Rule 2201]

5. Permittee shall maintain with the permit accurate fugitive component counts for equipment according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]

6. "Gas-tight" shall be defined as emitting no more than 10,000 ppm of methane measured in accordance with EPA Method 21. Emissions in excess of this is considered a leak. [District Rule 4623, 3.9, 3.10] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the vessel or associated with the gas collection system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070]
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. Collected vapors shall be discharged to the field gas gathering system, TEOR System S-1547-1079, or TEOR System S-1547-359. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC emission rate from components shall not exceed 15.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4 or other District-approved emission factors. [District Rule 2201] Federally Enforceable Through Title V Permit

5. All components in vapor service shall be inspected by the facility operator annually. The inspections shall be conducted in accordance with EPA Method 21, with an instrument calibrated with methane. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected, and found to be in compliance with the provisions of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Any component leak shall be repaired to a gas-tight condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2201] Federally Enforceable Through Title V Permit

8. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Emissions from components which have been tagged by the facility operator for repair or which have been repaired and are awaiting re-inspection shall not be violation of this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
3. Tank fume scrubber shall be operated while adding HCl into the storage tank. [District Rule 4102]
4. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
5. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
6. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacture's listed scrubbing efficiency. [District Rule 4102]
7. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1111-0
EXPIRATION DATE: 05/31/2007
SECTION: SE19  TOWNSHIP: 26S  RANGE: 21E
EQUIPMENT DESCRIPTION:
15,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - LOST HILLS TWO LEASE

PERMIT UNIT REQUIREMENTS

1. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
2. Tank fume scrubber shall be operational while adding HCl into the storage tank. [District Rule 4102]

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1113-0

SECTION: 27   TOWNSHIP: 28S   RANGE: 21E

EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
10,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - SECTION 27 WATER PLANT

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
3. Tank fume scrubber shall be operated while adding HCl into the storage tank. [District Rule 4102]
4. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
5. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
6. Fresh scrubber liquid (water) shall be added as necessary to maintain at least manufacture's listed scrubbing efficiency. [District Rule 4102]
7. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]
3. Tank shall vent only to vapor control system consisting of gas gathering system. [District Rule 2201]
4. The tank and tank vapor recovery system, including all piping, valves, and fittings shall be maintained in a gas-tight (as defined by Rule 4623) condition. [District Rule 4623]
5. The tank shall be equipped with a vapor recovery system consisting of a closed vent system that collects the VOCs from the storage tank, and a VOC control device. The vapor recovery system shall be APCO-approved and maintained in gas-tight condition. Collected vapors shall be directed to approved control devices having a destruction efficiency of at least 99% by weight as determined by the test method specified in Section 6.4.7. [District Rule 2201 & 4623]
6. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. When storing liquids with a true vapor pressure greater than 0.5 psia, a reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623 and shall be reported as a deviation. [District Rule 4623]
7. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 4623]
8. The tank shall be equipped with a vapor loss prevention system capable of collecting the VOC emissions and preventing their emissions to the atmosphere at an efficiency of at least 99% by weight. [District Rule 2201 and 4623]
9. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2201]
10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this permit. [District Rule 2201]
11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2201]

12. Any component leak shall be repaired to a leak-free condition within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. [District Rule 2201]

13. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2201]

14. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2]

15. The operator of a fixed roof tank shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2201]

16. VOC fugitive emissions from the components in gas service on tank and tank vapor control system, including vapor control system trunk line, shall not exceed 40.8 lb/day. [District Rule 2201]

17. Permittee shall maintain with the permit accurate fugitive component counts for tank and tank vapor control system, including vapor control system trunk line, according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]
PERMIT UNIT REQUIREMENTS

1. Tank gauging or sampling devices shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Except as allowed elsewhere in this permit, all piping valves and fittings shall be constructed and maintained in a gas tight condition. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District NSR Rule] Federally Enforceable Through Title V Permit

3. VOC emission rate from vapor control components associated with this emissions unit shall not exceed 10.0 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The true vapor pressure (TVP) of any liquid placed, stored or held in the tank shall be less than 0.5 psia at storage temperature. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

6. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times and shall monitor vapor recovery compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the tank or associated with the tank vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. This permit authorizes induced static flotation unit cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall conduct induced static flotation unit cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. Induced static flotation unit may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall notify the District Compliance division at least 48 hours before induced static flotation unit cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the tank. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Prior to opening the induced static flotation unit to allow cleaning the following procedures must be followed: Operate PV valve and vapor recovery system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the induced static flotation unit to the maximum extent feasible prior to opening the induced static flotation unit. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Prior to opening the induced static flotation unit to allow tank cleaning one of the following options must be followed: 1) operate the vapor recovery system for at least 24 hours after all the liquid in the induced static flotation unit has been drained to the maximum extent feasible, 2) displace vapors floating the oil pad off with water such that 90% of the induced static flotation unit liquid capacity is displaced, 3) vent the induced static flotation unit to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the induced static flotation unit to the vapor control system for a length of time determined by the following relationship: $t = 2.3 \frac{V}{Q}$, where $t$ = time, $V$ = induced static flotation unit volume (cubic feet), and $Q$ = flow rate to the vapor control system as determined using appropriate engineering calculations . [District Rule 2080] Federally Enforceable Through Title V Permit
20. The induced static flotation unit shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. Sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

22. Prior to reintroducing crude oil/water to the induced static flotation unit, the induced static flotation unit shall be filled to the maximum possible level with water or an organic liquid with a TVP less than 0.5 psia, the tank vapor control system shall be reactivated, and the liquid level shall be adjusted as necessary. Pressure/relief valve shall not open during filling of the induced static flotation unit. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Within 48 hours after refilling the induced static flotation unit with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular tank maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Permittee shall maintain records of each period of cleaning and maintenance when the induced static flotation unit is disconnected or isolated from the vapor control system. Records shall include the date that induced static flotation unit cleaning was initiated, the date induced static flotation unit cleaning was completed, the method of induced static flotation unit cleaning used, and a description of internal and external induced static flotation unit repairs and maintenance performed. Such records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

25. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, ‘1137, or ‘1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any FWKO gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained leak-free, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District Rules 2201 & 2520] Federally Enforceable Through Title V Permit

2. Vessel shall be designed and maintained to vent only to vapor collection system, permit S-1547-888, except during periods of vessel cleaning, vapor control system maintenance, and power outages due to a voluntary demand reduction program. [District NSR Rule] Federally Enforceable Through Title V Permit

3. An operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the ISF dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Except during periods of vapor control system maintenance, power outages, and tank cleaning, vapor control system shall operate with a minimum efficiency of 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All solids removed from vessel during normal operation shall be sent to sand basins permitted as S-1547-842, '1137, or '1138 or transferred offsite. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC fugitive emissions from the components in gas service on tank and tank vapor collection system shall not exceed 10.0 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using oil & gas production operations average emission factors from Table 2-4 of the U.S. EPA Publication 453/R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

8. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

9. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Any induced static floatation cell gauging or sampling device shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
11. All piping, fittings, and valves directly affixed to the induced static floatation cell or associated with the induced static floatation cell vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the induced static floatation cell components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no induced static floatation cell components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

17. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

18. The operator shall ensure that the vapor collection and control systems are functional and are operating as designed at all times, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

19. All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Except as allowed elsewhere in this permit, the vessel and all vessel appurtenances shall be maintained leak-free, as defined in Rule 4623, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Any component found to be in non-compliance with the gas-tight requirement shall be repaired to a gas-tight condition within 15 days of detection. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Vessel shall be designed and maintained to vent only to vapor control system listed on permit S-1547-704, except during periods of vessel cleaning, vapor control system maintenance, and power outages. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC emissions from vapor recovery components associated with this vessel shall not exceed 6.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All piping, fittings, and valves directly affixed to the tank or associated with the tank vapor recovery system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

6. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

7. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2]

8. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
9. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection.  
A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Permittee shall maintain an accurate fugitive component count for the vessel and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017. [District NSR Rule] Federally Enforceable Through Title V Permit

14. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-1122-1
SECTION: SW27 TOWNSHIP: 28S RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
UP TO 104 HEAVY OIL TEST STATIONS (HOTS), CLOSED PIPING SYSTEM, AND ONE OR MORE PRESSURE VESSEL TEST TANK(S)

PERMIT UNIT REQUIREMENTS

1. Total VOC fugitive emission rate from HOTs equipment shall not exceed 452.8 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
PERMIT UNIT REQUIREMENTS

1. FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from FWKO and a VOC control device. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO shall be designed and maintained to vent only to vapor control system S-1547-888 and an operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The operator shall ensure that the vapor control system is functional and is operating as designed at all times and shall monitor vapor control compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. VOC emission rate from vapor control components associated with this emissions unit shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Any FWKO gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
9. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall notify the District Compliance division at least 48 hours before FWKO cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the vessel. [District Rule 2080] Federally Enforceable Through Title V Permit
20. Prior to opening the FWKO to allow cleaning the following procedures must be followed: Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the FWKO to the maximum extent feasible prior to opening the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Prior to opening the FWKO to allow FWKO cleaning one of the following options must be followed: 1) operate the vapor control system for at least 24 hours after all the liquid in the FWKO has been drained to the maximum extent feasible, 2) displace vapors floating the oil pad off with water such that 90% of the FWKO liquid capacity is displaced, 3) vent the FWKO to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = \frac{2.3 \cdot V}{Q} \), where \( t \) = time, \( V \) = FWKO volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

22. The FWKO shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. Sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Prior to reintroducing crude oil/water to the FWKO, the FWKO unit shall be filled to the maximum possible level with water or an organic liquid with a TVP less than 0.5 psia, the vessel vapor control system shall be reactivated, and the liquid level shall be adjusted as necessary. Pressure/relief valve shall not open during filling of the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular vessel maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from FWKO and a VOC control device. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO shall be designed and maintained to vent only to vapor control system S-1547-888 and an operational flow check valve shall be operational (except during times when vapor control system line is closed) downstream of the FWKO dome gas separator. [District Rule 2201] Federally Enforceable Through Title V Permit

3. The operator shall ensure that the vapor control system is functional and is operating as designed at all times and shall monitor vapor control compressor activation and shut off manometer pressures on quarterly basis to ensure that compressor activation pressure does not exceed pressure relief valve setting. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

4. VOC emission rate from vapor control components associated with this emissions unit shall not exceed 13.5 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from U.S. EPA Publication 453/R-95-017, or other District approved factors. [District Rule 2201] Federally Enforceable Through Title V Permit

6. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

7. Except as otherwise provided in this permit, a reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Any FWKO gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
9. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

10. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following: 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

16. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

17. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

18. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

19. Permittee shall notify the District Compliance division at least 48 hours before FWKO cleaning and vapor control system disconnection and within 72 hours after restoring crude oil flow to the vessel. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
20. Prior to opening the FWKO to allow cleaning the following procedures must be followed: Operate PV valve and vapor control system (if equipped) during emptying, filling, and flushing. During filling and purging, no vapor leakage is allowed. Drain all liquid from the FWKO to the maximum extent feasible prior to opening the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

21. Prior to opening the FWKO to allow FWKO cleaning one of the following options must be followed: 1) operate the vapor control system for at least 24 hours after all the liquid in the FWKO has been drained to the maximum extent feasible, 2) displace vapors floating the oil pad off with water such that 90% of the FWKO liquid capacity is displaced, 3) vent the FWKO to the vapor control system until the vapor concentration is less than 10% of the lower explosive limit (LEL) or 5,000 ppmv whichever is less; or 4) vent the FWKO to the vapor control system for a length of time determined by the following relationship: \( t = 2.3 \frac{V}{Q} \), where \( t \) = time, \( V \) = FWKO volume (cubic feet), and \( Q \) = flow rate to the vapor control system as determined using appropriate engineering calculations. [District Rule 2080] Federally Enforceable Through Title V Permit

22. The FWKO shall be cleaned using water, hot water, solvents with an initial boiling point of greater than 302 F, solvents with a vapor pressure of less than 0.5 psia, or solvents with 50 grams VOC per liter or less. Sediment may be used for road mix as allowed by Section 6.17 of District Rule 2020. [District Rule 2080] Federally Enforceable Through Title V Permit

23. Steam cleaning shall be allowed only during December through March, or at locations where wastewater treatment facilities are limited. [District Rule 2080] Federally Enforceable Through Title V Permit

24. Prior to reintroducing crude oil/water to the FWKO, the FWKO unit shall be filled to the maximum possible level with water or an organic liquid with a TVP less than 0.5 psia, the vessel vapor control system shall be reactivated, and the liquid level shall be adjusted as necessary. Pressure/relief valve shall not open during filling of the FWKO. [District Rule 2080] Federally Enforceable Through Title V Permit

25. Within 48 hours after refilling the FWKO with crude oil/water, the pressure relief valve seats and hatch seals shall be inspected for leaks using EPA method 21 and the regular vessel maintenance and inspection program shall resume. [District Rule 2080] Federally Enforceable Through Title V Permit

26. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Tank shall store only hydrochloric acid (HCl). [District Rule 4102]
3. Tank fume scrubber shall be operated while adding HCl into the storage tank. [District Rule 4102]
4. Scrubber sprays and/or nozzles shall be maintained in optimum working condition. [District Rule 4102]
5. Scrubber shall be operated and maintained in accordance with the manufacturer's recommendations. [District Rule 4102]
6. Fresh scrubber liquid (water) shall be added per manufacturer's recommendations to maintain a scrubbing efficiency of at least 99%. [District Rule 4102]
7. Spent packed water column water shall be disposed of in a manner preventing acid emissions. [District Rule 4102]
PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District NSR Rule] Federally Enforceable Through Title V Permit

3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

4. VOC emissions shall not exceed the following 0.006 lb/sq ft-day. [District NSR Rule] Federally Enforceable Through Title V Permit

5. The sand basin surface area shall not exceed 2,500 sq.ft. [District NSR Rule] Federally Enforceable Through Title V Permit

6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1138-1

EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
ONE 150,000 GALLON OILFIELD PRODUCTION SAND BASIN. - (DEHY 2)

PERMIT UNIT REQUIREMENTS

1. Sand basin shall receive liquids and solids only from AERA's Heavy Oil Western Stationary Source. [District NSR Rule] Federally Enforceable Through Title V Permit
2. The sand basin shall be covered by a tarp (sun screen) to aid in reducing potential air contaminant emissions except during maintenance and clean out operations. [District NSR Rule] Federally Enforceable Through Title V Permit
3. During the clean out operation, the solids and liquids shall be removed from the sand basin in a timely manner to minimize VOC emissions. [District NSR Rule] Federally Enforceable Through Title V Permit
4. VOC emissions shall not exceed the following 0.006 lb/sq ft-day. [District NSR Rule] Federally Enforceable Through Title V Permit
5. The sand basin surface area shall not exceed 2,500 sq.ft. [District NSR Rule] Federally Enforceable Through Title V Permit
6. This sand basin shall not operate as a sump as defined in District Rule 4402. [District Rule 4402, 2.0] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. FWKO shall be equipped with a vapor control system consisting of a closed vent system that collects all VOCs from FWKO and a VOC control device. The vessel and APCO-approved vapor control system, including piping, valves, and fittings, shall be maintained in a gas tight condition. [District Rule 2201] Federally Enforceable Through Title V Permit

2. FWKO shall be designed and maintained to vent only to vapor control system S-1547-854. [District Rule 2201] Federally Enforceable Through Title V Permit

3. VOC emission rate from components in gas and light crude oil service associated with this emission unit shall not exceed 9.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using emission factors from EPA Publication 453/R-95-017 Protocol for Equipment Leak Emission Estimates Table 2-4 Oil and Gas Production Operations Average Emission Factors (kg/hr/source). [District Rule 2201] Federally Enforceable Through Title V Permit

5. A gas-tight condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. [District Rule 2520] Federally Enforceable Through Title V Permit

6. Any FWKO gauging or sampling device shall be equipped with a gas-tight cover which shall be closed at all times except during gauging or sampling. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves directly affixed to the FWKO or associated with the FWKO vapor control system shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the FWKO components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no FWKO components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within thirty working days after the date on which the component is repaired. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

14. This permit authorizes FWKO cleaning that is not the result of breakdowns or poor maintenance as a routine maintenance activity. [District Rule 2080] Federally Enforceable Through Title V Permit

15. Permittee shall conduct FWKO cleaning and maintenance operations in accordance with District approved procedure as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

16. FWKO may be disconnected from vapor control system during District approved cleaning and maintenance procedures as described in this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

17. FWKO cleaning shall not exceed once per calendar quarter and records (time and date of start and completion) of such cleaning shall be maintained and available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

18. Permittee shall notify the District Compliance division at least 72 hours before FWKO cleaning and vapor control system disconnection. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on the premises for a period of at least five years and made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve's set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC emissions from this tank shall not exceed 108.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

8. Tank may vent to vapor control system listed on PTO S-1547-854. Tank may be isolated from the vapor control system at any time (e.g. tank cleaning, maintenance, operational demands, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit

9. When tank is connected to vapor control system, operator shall implement the inspection and maintenance program described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

10. All piping, fittings, and valves on this vessel shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If any of the vessel components are found to be leaking, operator shall immediately affix a tag and maintain records of liquid leak and gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Comply with the following requirements to repair leaking components that have a gas leak >10,000 ppmv (measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane):
   a. Eliminate the leak within 8 hours after detection; or
   b. If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and
   c. Eliminate the leak within 48 hours after minimization; and
   d. In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

14. If a component type for a given vessel is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following:
   1) Type of component leaking;
   2) Date of leak detection, and method of detection;
   3) Date and emission level of recheck after leak is repaired;
   4) Method used to minimize the leak to the lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. The permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

17. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit


19. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

20. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit

21. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit

22. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201] Federally Enforceable Through Title V Permit

5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer’s instructions, and shall remain in gas-tight condition except when the operating pressure exceeds the valve’s set pressure. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC emissions from this tank shall not exceed 108.2 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) of less than 0.5 psia under all storage conditions. [District Rule 4623] Federally Enforceable Through Title V Permit

8. Tank may vent to vapor control system listed on PTO S-1547-854. Tank may be isolated from the vapor control system at any time (e.g. tank cleaning, maintenance, operational demands, etc.). [District Rule 2201] Federally Enforceable Through Title V Permit

9. When tank is connected to vapor control system, operator shall implement the inspection and maintenance program described in this permit. [District Rule 2201] Federally Enforceable Through Title V Permit

10. All piping, fittings, and valves on this vessel shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 2201] Federally Enforceable Through Title V Permit

11. If any of the vessel components are found to be leaking, operator shall immediately affix a tag and maintain records of liquid leak and gas leak detection readings, date/time leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Comply with the following requirements to repair leaking components that have a gas leak >10,000 ppmv (measured in accordance with EPA Method 21 by a portable hydrocarbon detection instrument that is calibrated with methane):
   a. Eliminate the leak within 8 hours after detection; or
   b. If the leak can not be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices; and
   c. Eliminate the leak within 48 hours after minimization; and
   d. In no event that the total time to minimize and eliminate the leak shall exceed 56 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

14. If a component type for a given vessel is found to leak during an annual inspection, then conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If a component type is found to have no leak after four consecutive quarterly inspections, then revert to annual inspections. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Operator shall maintain an inspection log containing the following:
   1) Type of component leaking;
   2) Date of leak detection, and method of detection;
   3) Date and emission level of recheck after leak is repaired;
   4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201] Federally Enforceable Through Title V Permit

16. The permittee shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank in order to maintain exemption from the rule. [District Rules 2201 and 4623] Federally Enforceable Through Title V Permit

17. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. The permittee shall also conduct an API gravity testing. [District Rule 4623] Federally Enforceable Through Title V Permit


19. For crude oil with an API gravity of 26 degrees or less, the TVP shall be determined using the latest version of the Lawrence Berkeley National Laboratory "test Method for Vapor pressure of Reactive Organic Compounds in Heavy Crude Oil Using Gas Chromatograph", as approved by ARB and EPA. [District Rule 4623] Federally Enforceable Through Title V Permit

20. Permittee shall submit the records of TVP and API gravity testing to the APCO within 45 days after the date of testing. The records shall include the tank identification number, Permit to Operate number, type of stored organic liquid, TVP and API gravity of the organic liquid, test methods used, and a copy of the test results. [District Rule 4623] Federally Enforceable Through Title V Permit

21. The permittee shall keep accurate records of each organic liquid stored in the tank, including its storage temperature, TVP and API gravity. [District Rule 4623] Federally Enforceable Through Title V Permit

22. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

3. The pressure vessel shall vent only to the vapor control system listed on S-1547-707. [District Rule 2080] Federally Enforceable Through Title V Permit

4. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

14. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1203-0
EXPIRATION DATE: 05/31/2007

SECTION: 1 TOWNSHIP: 11N RANGE: 24W

EQUIPMENT DESCRIPTION:
700 BBL FWKO VESSEL (V-103) CONNECTED TO TEOR WELL VENT VAPOR COLLECTION SYSTEM S-1547-707
(D&E SANDS)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

3. The pressure vessel shall vent only to the vapor control system listed on S-1547-707. [District Rule 2080] Federally Enforceable Through Title V Permit

4. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

14. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

3. The pressure vessel shall vent only to the vapor control system listed on S-1547-442. [District Rule 2080] Federally Enforceable Through Title V Permit

4. The tank and all piping, valves and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

5. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take on of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

3. The pressure vessel shall vent only to the vapor control system listed on S-1547-442. [District Rules 2080] Federally Enforceable Through Title V Permit

4. The tank and all piping, valves and fittings shall be constructed and maintained in a leak-free condition. [District Rule 4623] Federally Enforceable Through Title V Permit

5. A leak-free condition is a condition without a gas leak or a liquid leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument that is calibrated with methane in accordance with the procedures specified in EPA Test Method 21. A liquid leak is defined as the dripping of organic liquid at a rate of more than 3 drops per minute. [District Rule 4623] Federally Enforceable Through Title V Permit

6. Any tank gauging or sampling device on a tank vented to the vapor recovery system shall be equipped with a leak-free cover which shall be closed at all times except during gauging or sampling. [District Rule 4623] Federally Enforceable Through Title V Permit

7. Operator shall visually inspect tank shell, hatches, seals, seams, cable seals, valves, flanges, connectors, and any other piping components directly affixed to the tank and within five feet of the tank at least once per year for liquid leaks, and with a portable hydrocarbon detection instrument conducted in accordance with EPA Method 21 for gas leaks. Operator shall also visually or ultrasonically inspect as appropriate, the external shells and roofs of uninsulated tanks for structural integrity annually. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

8. Upon detection of a liquid leak, defined as a leak rate of greater than or equal to 30 drops per minute, operator shall repair the leak within 8 hours. For leaks with a liquid leak rate of between 3 and 30 drops per minute, the leaking component shall be repaired within 24 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

9. Upon detection of a gas leak, defined as a VOC concentration of greater than 10,000 ppmv measured in accordance with EPA Method 21, operator shall take one of the following actions: 1) eliminate the leak within 8 hours after detection; or 2) if the leak cannot be eliminated, then minimize the leak to the lowest possible level within 8 hours after detection by using best maintenance practices, and eliminate the leak within 48 hours after minimization. In no event shall the total time to minimize and eliminate a leak exceed 56 hours after detection. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit
10. Components found to be leaking either liquids or gases shall be immediately affixed with a tag showing the component to be leaking. Operator shall maintain records of the liquid or gas leak detection readings, date/time the leak was discovered, and date/time the component was repaired to a leak-free condition. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

11. Leaking components that have been discovered by the operator that have been immediately tagged and repaired within the timeframes specified in District Rule 4623, Table 3 shall not constitute a violation of District Rule 4623. Leaking components as defined by District Rule 4623 discovered by District staff that were not previously identified and/or tagged by the operator, and/or any leaks that were not repaired within the timeframes specified in District Rule 4623, Table 3 shall constitute a violation of District Rule 4623. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

12. If a component type for a given tank is found to leak during an annual inspection, operator shall conduct quarterly inspections of that component type on the tank or tank system for four consecutive quarters. If no components are found to leak after four consecutive quarters, the operator may revert to annual inspections. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

13. Any component found to be leaking on two consecutive annual inspections is in violation of District Rule 4623, even if covered under the voluntary inspection and maintenance program. [District Rule 4623, Table 3] Federally Enforceable Through Title V Permit

14. Operator shall maintain an inspection log containing the following: 1) Date of all inspections; 2) Type and identification of leaking components; 3) Date of leak detection and method of detection; 4) Method used to minimize leak; and 5) Date and emission level of recheck after leak is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2080 and 4623] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

3. The pressure vessel shall vent only to the vapor control system listed on S-1547-843. [District Rule 2080] Federally Enforceable Through Title V Permit

4. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

14. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

3. The pressure vessel shall vent only to the vapor control system listed on S-1547-843. [District Rule 2080] Federally Enforceable Through Title V Permit

4. All piping, fittings, and valves shall be constructed and maintained in a leak-free condition. [District Rule 2080] Federally Enforceable Through Title V Permit

5. Vessel covers, inspection hatches, etc. shall be maintained in a leak-free condition except during vessel cleaning, repair, or maintenance. [District Rule 2080] Federally Enforceable Through Title V Permit

6. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and shall be reported as a deviation. [District Rule 2080] Federally Enforceable Through Title V Permit

7. All piping, fittings, and valves shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the provisions of this permit. If any of the tank components are found to leak during an annual inspection, the inspection frequency for that component type shall be changed from annual to quarterly. If no tank components are subsequently found to be leaking during five consecutive inspections, the inspection frequency may be changed from quarterly to annual. Components located in inaccessible (over 15 feet above ground when access is required from the ground or over 6 feet away from a platform when access is required from the platform) locations shall be inspected at least annually and components located in unsafe areas shall be inspected and repaired at the next process unit turnaround (the scheduled shutdown of a unit for maintenance and repair work). [District Rule 2080] Federally Enforceable Through Title V Permit

8. A facility operator, upon detection of a leaking component, shall affix to that component a weatherproof readily visible tag bearing the date on which the leak is detected. The tag shall remain in place until the leaking component is repaired, reinspected and found to be in compliance with the requirements of this rule. [District Rule 2080] Federally Enforceable Through Title V Permit

9. An operator shall reinspect a component for leaks within 30 working days after the date on which the component is repaired. [District Rule 2080] Federally Enforceable Through Title V Permit

10. Emissions from components which have been tagged by the facility operator for repair within 15 calendar days or which have been repaired and are awaiting re-inspection shall not be in violation of this permit. [District Rule 2080] Federally Enforceable Through Title V Permit
11. Any component leak shall be repaired to a leak-free condition or vented to a flare satisfying the requirements of 40 CFR 60.18 or to a vapor control device that is at least 95 percent efficient as measured by EPA Method 25 within fifteen (15) calendar days of detection. The APCO may grant a ten (10) calendar day extension provided the operator demonstrates that necessary and sufficient actions are being taken to correct the leak within this time period. Any vapor control device, other than a flare, used to comply with this condition shall demonstrate at least 95% control efficiency as measured by EPA Method 25 at least annually. [District Rule 2080] Federally Enforceable Through Title V Permit

12. If the leaking component is an essential part of a critical process unit which cannot be immediately shut down for repairs, the operator shall 1) Minimize the leak within 15 calendar days; and 2) If the leak which has been minimized still exceeds the concentration allowed by this permit, the essential component shall be repaired to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection. A critical process unit is any process unit which would result in the automatic shutdown of other process units if it were shut down. [District Rule 2080] Federally Enforceable Through Title V Permit

13. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date of leak detection, and method of detection; 3) Date and emission level of recheck after leak is repaired; 4) Identification and location of essential parts of critical process units found leaking that cannot be repaired until the next process unit turnaround; and 5) Method used to minimize the leak from essential parts of critical process units which cannot be repaired until the next process unit turnaround. [District Rule 2080] Federally Enforceable Through Title V Permit

14. The operator shall ensure that the vapor recovery system is functional and is operating as designed at all times. [District Rule 2080] Federally Enforceable Through Title V Permit

15. All records required to be maintained by this permit shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 2080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. This tank may be operated to store chemicals for the treatment of produced fluids from facilities S-1547 and S-1548. [District Rule 2080]

2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

3. Tank shall be equipped with an operational temperature indicator. [District Rule 2201]

4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]

5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623]

6. This tank shall be in a leak-free condition. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623. [District Rule 4623]

7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623]

8. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201]

9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not to exceed 2.1 psia under all storage conditions. [District Rules 2201 and 4623]

10. Tank throughput shall not exceed 234,000 gallon per year. [District Rule 2201]

11. Tank throughput shall not exceed 6,500 gallon per day. [District Rule 2201]

12. VOC emission rate from the tank shall not exceed 2.7 lb/day [District Rule 2201]

13. True vapor testing (TVP) testing to demonstrate compliance with Rule 4623 shall be conducted within 60 days of startup, and once every 24 months during summer (July - September) thereafter. [District Rules 1081 and 4623]

14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623, 6.2.1.2]
15. The permit holder shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2]

16. The true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of the "California Air Resources Board's (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588," dated August 1989. [District Rule 4623, 6.4.3]

17. In lieu of testing each uncontrolled fixed roof tank, the permit holder may conduct a TVP testing of the organic liquid stored in a representative tank provided the following requirements are met: (1) the selection of representative, uncontrolled fixed roof tanks shall be submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) one uncontrolled fixed roof tank represents some or all of the tanks in a tank battery (as defined in Rule 4623, Section 3.31, Amended 5/19/05); (3) the TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent; and (4) the stored organic liquid in each of the represented tanks is the same and came from the same source. [District Rule 4623, 6.2.1.1]

18. An operator shall submit the records of TVP testing conducted in accordance with the testing requirements of Rule 4623, 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6]

19. Permittee shall maintain accurate records of tank throughput, true vapor pressure and temperature of liquid in the tank, inspection log and such records shall be retained on-site for a minimum of five (5) years and made available for APCO upon request, except for certain records that need to be submitted as specified in this permit. [District Rules 2201 and 4623]
PERMIT UNIT REQUIREMENTS

1. This tank may be operated to store chemicals for the treatment of produced fluids from facilities S-1547 and S-1548. [District Rule 2080]

2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201]

3. Tank shall be equipped with an operational temperature indicator. [District Rule 2201]

4. The tank shall be equipped with a fixed roof with no holes or openings. [District Rule 2201]

5. This tank shall be equipped with a pressure-vacuum (PV) relief valve set to within 10% of the maximum allowable working pressure of the tank, permanently labeled with the operating pressure settings, properly maintained in good operating order in accordance with the manufacturer's instructions, and shall remain in leak-free condition except when the operating pressure exceeds the valve's set pressure. [District Rule 4623]

6. This tank shall be in a leak-free condition. A leak-free condition is defined as a condition without a gas leak. A gas leak is defined as a reading in excess of 10,000 ppmv, above background, as measured by a portable hydrocarbon detection instrument in accordance with the procedures specified in EPA Test Method 21. A reading in excess of 10,000 ppmv above background is a violation of this permit and Rule 4623. [District Rule 4623]

7. All piping, fittings, and valves on this tank shall be inspected annually by the facility operator in accordance with EPA Method 21, with the instrument calibrated with methane, to ensure compliance with the leaking provisions of this permit. [District Rule 4623]

8. Operator shall maintain an inspection log containing the following 1) Type of component leaking; 2) Date and time of leak detection, and method of detection; 3) Date and time of leak repair, and emission level of recheck after leak is repaired; 4) Method used to minimize the leak to lowest possible level within 8 hours after detection. [District Rule 2201]

9. This tank shall only store, place, or hold organic liquid with a true vapor pressure (TVP) not to exceed 2.1 psia under all storage conditions. [District Rules 2201 and 4623]

10. Tank throughput shall not exceed 234,000 gallon per year. [District Rule 2201]

11. Tank throughput shall not exceed 6,500 gallon per day. [District Rule 2201]

12. VOC emission rate from the tank shall not exceed 2.7 lb/day [District Rule 2201]

13. True vapor testing (TVP) testing to demonstrate compliance with Rule 4623 shall be conducted within 60 days of startup, and once every 24 months during summer (July - September) thereafter. [District Rules 1081 and 4623]

14. The TVP testing shall be conducted at actual storage temperature of the organic liquid in the tank. [District Rule 4623, 6.2.1.2]
15. The permit holder shall conduct true vapor pressure (TVP) testing of the organic liquid stored in this tank at least once every 24 months during summer (July - September), and/or whenever there is a change in the source or type of organic liquid stored in this tank. [District Rule 4623, 6.2.2]

16. The true vapor pressure (TVP) shall be measured using Reid vapor pressure ASTM Method D323, and converting the RVP to TVP at the tank's maximum organic liquid storage temperature. The conversion of RVP to TVP shall be done in accordance with the oil and gas section of the "California Air Resources Board's (ARB) Technical Guidance Document to the Criteria and Guidelines Regulations for AB 2588," dated August 1989. [District Rule 4623, 6.4.3]

17. In lieu of testing each uncontrolled fixed roof tank, the permit holder may conduct a TVP testing of the organic liquid stored in a representative tank provided the following requirements are met: (1) the selection of representative, uncontrolled fixed roof tanks shall be submitted in writing to the APCO, and written approval is granted by the APCO prior to conducting the test; (2) one uncontrolled fixed roof tank represents some or all of the tanks in a tank battery (as defined in Rule 4623, Section 3.31, Amended 5/19/05); (3) the TVP and storage temperature of the stored organic liquid of the representative tank to be tested are the same or higher than those of the tanks it is to represent; and (4) the stored organic liquid in each of the represented tanks is the same and came from the same source. [District Rule 4623, 6.2.1.1]

18. An operator shall submit the records of TVP testing conducted in accordance with the testing requirements of Rule 4623, 6.2 to the APCO within 45 days after the date of testing. The record shall include the tank identification number, PTO number, type of stored organic liquid, TVP of the stored organic liquid, test methods used, and a copy of the test results. [District Rule 4623, 6.3.6]

19. Permittee shall maintain accurate records of tank throughput, true vapor pressure and temperature of liquid in the tank, inspection log and such records shall be retained on-site for a minimum of five (5) years and made available for APCO upon request, except for certain records that need to be submitted as specified in this permit. [District Rules 2201 and 4623]
TEOR WELLS
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-359-26
EXPIRATION DATE: 05/31/2007

SECTION: 33  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
VAPOR COLLECTION AND CONTROL SYSTEM SERVING 1657 THERMALLY ENHANCED WELLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21E

PERMIT UNIT REQUIREMENTS

1. Vapor collection and control system can receive vapors from tank vapor control system S-1547-888, TEOR system S-1547-1079, free water knockout vessel S-1547-1104, and degassing operation S-1547-1141. [District Rule 2201] Federally Enforceable Through Title V Permit

2. Vapor collection system shall include 2 sulfur scrubbing systems, using District approved scrubbing agents. Scrubber(s) may be by-passed only when incinerating vapors in scrubbed steam generator S-1547-47. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Scrubbed gases shall be incinerated in steam generators S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837. Alternatively, the wells can be operated with the casing vents closed. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Unscrubbed vapor may be routed to the Sec. 32 Belridge gas plant (S-1543-4) via the Del Sur gas gathering system (compressors S-1578-433, '-434, '-435 and emergency flare S-1548-134). [District Rule 2201] Federally Enforceable Through Title V Permit

5. Vapor collection system shall be equipped with heat exchangers, gas/liquid separators, 2 gas compressors, compressor discharge knock-outs, and liquid pumps. [District Rule 2201] Federally Enforceable Through Title V Permit

6. All produced fluids from any well served by vapor collection system which has had the casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District Rule 2201] Federally Enforceable Through Title V Permit

8. The regeneration vessel air vent at each sulfur scrubbing system may be vented to atmosphere provided daily emissions from each vent shall not exceed 2.0 lbs VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall determine VOC content of the exhaust at each regeneration vessel air vent semi-annually. If a semi-annual VOC content analysis fails to show compliance, the regeneration vessel air vents shall be tested once per week. If compliance with the VOC content limit has been demonstrated for eight consecutive weeks, then the VOC content testing frequency shall revert to semi-annually. Gas analysis shall be performed using ASTM D-3588. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Total mass flowrate of sulfur compounds in gas leaving sulfur removal systems shall not exceed 336.92 lb/day as sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,888.1 lb/day (including regeneration vessel air vents). [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall maintain accurate records of sulfur content and daily vapor flow rate of all uncondensed vapors sent to approved incineration devices S-1547-726, '-733, '-735 through '-738, '-742 through '-749, '-760, '-761, '-762, '-803, '-834, '-835, and '-837 for disposal. Permittee shall maintain an accurate record of the daily flow rate of unscrubbed vapor routed to the Sec. 32 Belridge gas plant, S-1543-4. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

14. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

15. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9] Federally Enforceable Through Title V Permit

16. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.5.1 and 5.5.2] Federally Enforceable Through Title V Permit

17. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates that one or more of the following conditions exist at the facility: Existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401 5.6.2] Federally Enforceable Through Title V Permit

18. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20] Federally Enforceable Through Title V Permit

19. An operator shall be in violation of this rule if any District inspection demonstrates that one or more of the following conditions exist at the facility or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates that one or more of the conditions in Section 5.6.2 exist at the facility: existence of a component with any of the following: a major liquid leak, a gas leak greater than 50,000 ppmv, a minor liquid leak or a minor gas leak in excess of the allowable number of leaks allowed by Table 3 of Rule 4401, or a gas leak greater than 10,000 ppmv up to 50,000 ppmv in excess of the allowable number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401 5.6.2] Federally Enforceable Through Title V Permit

20. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.6.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.9 of Rule 4401. [District Rule 4401 5.7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 5.7.2] Federally Enforceable Through Title V Permit

22. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.7.3] Federally Enforceable Through Title V Permit

23. Except for pipes and unsafe-to-monitor components, an operator shall inspect all other components pursuant to the requirements of Section 6.3.3 of Rule 4401 at least once every year. [District Rule 4401 5.8.1] Federally Enforceable Through Title V Permit

24. An operator shall visually inspect all pipes at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401 5.8.2] Federally Enforceable Through Title V Permit

25. In addition to the inspections required by Section 5.8.1 of Rule 4401, an operator shall inspect for leaks all accessible operating pumps, compressors, and PRDs in service as follows: An operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than the time frame specified in Table 4 of Rule 4401. [District Rule 4401 5.8.3] Federally Enforceable Through Title V Permit

26. In addition to the inspections required by Sections 5.8.1, 5.8.2 and 5.8.3 of Rule 4401, operator shall perform the following: initially inspect a PRD that releases to the atmosphere as soon as practicable but not later than 24 hours after the discovery of the release, re-inspect the PRD not earlier than 24 hours after the initial inspection but not later than 15 calendar days after the initial inspection, inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. Except for PRDs subject to the requirements of Section 5.8.4.1 of Rule 4401, an operator shall inspect a component that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. [District Rule 4401 5.8.4] Federally Enforceable Through Title V Permit

27. An operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401 5.8.5] Federally Enforceable Through Title V Permit

28. District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401 5.8.6] Federally Enforceable Through Title V Permit

29. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401 5.9.1] Federally Enforceable Through Title V Permit

30. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.9.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.2] Federally Enforceable Through Title V Permit

31. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401 5.9.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
32. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401 5.9.4] Federally Enforceable Through Title V Permit

33. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401 5.9.4] Federally Enforceable Through Title V Permit

34. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.5] Federally Enforceable Through Title V Permit

35. The time of the initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.6] Federally Enforceable Through Title V Permit

36. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401 5.9.7] Federally Enforceable Through Title V Permit

37. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401 6.1.1] Federally Enforceable Through Title V Permit

38. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401 6.1.3] Federally Enforceable Through Title V Permit

39. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4] Federally Enforceable Through Title V Permit

40. Operator of any steam-enhanced crude oil production well shall keep an inspection log maintained pursuant to Section 6.4 of Rule 4401. [District Rule 4401 6.1.5] Federally Enforceable Through Title V Permit

41. Records of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components, including a copy of current calibration gas certification from the vendor of said calibration gas cylinder, the date of calibration, concentration of calibration gas, instrument reading of calibration gas before adjustment, instrument reading of calibration gas after adjustment, calibration gas expiration date, and calibration gas cylinder pressure at the time of calibration shall be maintained. [District Rule 4401 6.1.6] Federally Enforceable Through Title V Permit

42. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401 6.1.7] Federally Enforceable Through Title V Permit

43. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8] Federally Enforceable Through Title V Permit

44. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit

45. An operator that source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
46. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401 6.2.2] Federally Enforceable Through Title V Permit

47. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3] Federally Enforceable Through Title V Permit

48. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4] Federally Enforceable Through Title V Permit

49. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401 6.3.1] Federally Enforceable Through Title V Permit

50. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401 6.3.2] Federally Enforceable Through Title V Permit

51. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer’s instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3] Federally Enforceable Through Title V Permit

52. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401 6.3.5] Federally Enforceable Through Title V Permit

53. Operator shall maintain an inspection log in which an operator records, at a minimum, all of the following information for each inspection performed: The total number of components inspected, total number and percentage of leaking components found by component type, location, type, and name or description of each leaking component and description of any unit where the leaking component is found, date of leak detection and the method of leak detection. For gaseous leaks, the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak, the date of repair, replacement, or removal from operation of leaking components, identify and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, the date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced, the inspector's name, business mailing address, and business telephone number, date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401 6.4] Federally Enforceable Through Title V Permit
54. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

55. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

56. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

57. All records of required monitoring data and support information shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-536-3
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
5 UNCONTROLLED CYCLIC OIL WELLS

PERMIT UNIT REQUIREMENTS

X. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

2. An accurate roster of all cyclic wells on this Permit shall be maintained and made readily available for District inspection upon request. [District NSR Rule & District Rule 4401] Federally Enforceable Through Title V Permit

3. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.5.1, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401, 4.5.1] Federally Enforceable Through Title V Permit

4. Total number of uncontrolled cyclic wells exempt from control requirements pursuant to Rule 4401 section 4.5 shall not exceed 5. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit

5. Total number of uncontrolled cyclic wells undergoing pilot testing (exempt from control requirements pursuant to Rule 4401 section 4.3) shall not exceed 40. [District Rule 4401, 4.3] Federally Enforceable Through Title V Permit

6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401, 4.3.1] Federally Enforceable Through Title V Permit

7. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401, 3.7] Federally Enforceable Through Title V Permit

X. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District Inspection upon request [District Rule 4401]

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Crude oil produced from wells with vents shut in shall be handled only in production facilities equipped with District approved vapor loss prevention devices. [District Rule 4401] Federally Enforceable Through Title V Permit

2. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam-enhanced wells with closed-casing vents, and such listing shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

3. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

4. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

5. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5-0 (as amended January 15, 1998). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

6. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

7. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

8. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

9. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

10. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

11. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended January 15, 1998) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

12. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

14. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

15. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

16. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

17. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

18. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

19. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.3.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

20. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley  
Air Pollution Control District

PERMIT UNIT: S-1547-704-12          EXPIRATION DATE: 05/31/2007
SECTION: 26  TOWNSHIP: 29  RANGE: 21

EQUIPMENT DESCRIPTION:
TEOR OPERATION WELL VENT VAPOUR CONTROL SYSTEM CONSISTING OF COMPRESSOR(S), PUMP(S), PRESSURE VESSEL(S), AND COOLER(S) SERVING 41 STEAM DRIVE WELLS, TANKS, FREE WATER KNOCKOUTS, AND OTHER VESSELS

PERMIT UNIT REQUIREMENTS

1. Operation shall include non-condensible vapor piping from vapor recovery skids to balanced system. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Collected vapors from well casing vents shall be sent to the approved incineration devices listed on this permit. Alternatively, the wells can be operated with the casing vents shut-in or collection system "balanced" by tying the casing vents together and letting the pressure balance between the well-head casing vents. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Operation shall include vapor control equipment which consists of miscellaneous knockout vessels & liquid removal pumps, heat exchangers and vapor compressors. [District NSR Rule] Federally Enforceable Through Title V Permit

4. All produced fluids from any well served by vapor collection system which has had casing gas flow restricted or casing vent closed shall be handled only in closed production equipment served by a 99% effective vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Water/VOC condensate from all liquid knockout drums shall be pumped to the production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District Rule 4401] Federally Enforceable Through Title V Permit

8. Fugitive VOC emissions from this equipment and shared vapor control system shall not exceed 41.6 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain with the permit accurate fugitive component counts for this equipment and shared vapor control system, including vapor control system trunk line, according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA -453/R-95-017. [District Rule 2201]

10. All seams, joints, piping, valves and fittings on the well vent vapor control system shall be constructed and maintained in a leak-free condition except as provided below. [District Rule 4401] Federally Enforceable Through Title V Permit

11. Components shall be inspected and leaks repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
12. The number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number allowed by Rule 4401 at any time. [District Rule 4401] Federally Enforceable Through Title V Permit

13. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

14. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

15. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

16. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

17. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

18. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

19. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

20. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

21. Vapor control system shall handle collected vapor from the following well vent vapor collection systems and tanks: S-1547-378, -379, -380, -383, -407, -408, -410, -411, -704, -1100, -1101, -1102, -1106, -1115, and -1121. [District Rule 2201]

22. Uncondensable gases shall only be controlled by one or more of the following options: 1) incineration in scrubbed steam generators S-1547-1, -3, -141, -142, -143, or -144; 2) incineration in standby flare S-1547-414; or 3) transmitted to Section 2 Dehydration facility (S-1547-888). [District Rule 2201] Federally Enforceable Through Title V Permit

23. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

24. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

25. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit
26. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

27. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

28. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

29. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

30. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

31. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

32. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

33. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain with permit a current listing of all steam enhanced wells connected to this TEOR system and shall make such listing readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Steam enhanced oil production wells connected to this TEOR system shall either vent to TEOR system S-1547-819 or be injected into Department of Oil Gas and Geothermal Resources (DOGGR) approved well(s). [District NSR Rule] Federally Enforceable Through Title V Permit

3. In the event of failure of any components in the vapor control system, gas flow from all wells served by this vapor control system shall be stopped by closing valve upstream of separator vessel or shall be directed through the vapor control system valves and piping which bypass the failed equipment and to the authorized steam generators. During periods when gas flow from wells is stopped, produced fluids shall be directed to tanks S-1547-843 through '853, and '884. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Leak shall be defined as the dripping of VOC-containing liquid or the detection of total organic compounds in concentration above background, as determined according to EPA Method 21 using an instrument calibrated with methane, that exceeds the values specified in Table 1, and Sections 3.20.2.1 and 3.20.2.2 of Rule 4401. [District Rule 4401, 3.2] Federally Enforceable Through Title V Permit

5. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the requirements of District Rule 4401 (as amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

6. The operator shall maintain a copy of the latest APCO-approved Operator Management Plan (OMP) at the facility and make it available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

7. By January 30 of each year, the operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to the existing, approved OMP. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

8. In accordance with the approved OMP, the operator shall meet all applicable operating, inspection and re-inspection, leak-repair, maintenance, component identification, record keeping, and notification requirements of Rule 4401 for all steam enhanced crude oil production wells at this facility except for those wells and components specifically exempted in Section 4.0 of Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

9. The inspection and re-inspection requirements set forth in Sections 5.8.1 through 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of 10% by weight or less. [District Rule 4401, 4.9] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
10. The operator shall be in violation of Rule 4401 if any District inspection, or any operator inspection that is required by this rule, demonstrates that one or more of the leak standard conditions set forth in section 5.6.2 exists. [District Rule 4401, 5.6.1] Federally Enforceable Through Title V Permit

11. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

12. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

13. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401, 6.2.1 and 6.2.2] Federally Enforceable Through Title V Permit

14. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 18, 25 or 25a as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

15. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

2. VOC content of the casing gas shall not exceed 10% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

3. Permittee shall maintain with this permit a current listing of all steam-enhanced wells connected to this TEOR system and shall make the list readily available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

4. Well casing vents may be closed individually, or they may be tied together in a balanced system between wells, provided they are served only by production facilities with District-approved emission control systems that have a VOC destruction or removal efficiency of at least 99%. [District Rule 4401, 5.5] Federally Enforceable Through Title V Permit

5. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates the existence of an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines, a component with a major liquid leak, or a component with a gas leak greater than 50,000 ppmv. [District Rule 4401, 5.6.2] Federally Enforceable Through Title V Permit

6. An operator shall be in violation of this rule if any District inspection demonstrates or if any operator inspection conducted pursuant to Section 5.8 of Rule 4401 demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or a gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401, 5.6.2] Federally Enforceable Through Title V Permit

7. No leaking components (as defined in Section 5.6.2 of Rule 4401) may be used unless they have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.9. [District Rule 4401, 5.7] Federally Enforceable Through Title V Permit

8. Each hatch shall be closed at all times except during attended repair, replacement, or maintenance operations, providing such activities are done as expeditiously as possible with minimal spillage or material and VOC emissions into the atmosphere. [District Rule 4401, 5.7] Federally Enforceable Through Title V Permit
9. Upon detection of a leak, an operator shall affix a readily visible weatherproof tag to that leaking component that includes the following information: 1) The date and time of leak detection; 2) The date and time of the leak measurement; 3) For a gaseous leak, the leak concentration in ppmv; 4) For a liquid leak, whether it is a major or minor liquid leak; and 5) Whether the component is an essential component, and unsafe-to-monitor component, or a critical component. [District Rule 4401, 5.9.1] Federally Enforceable Through Title V Permit

10. The tag shall remain affixed to the leaky component until all the following requirements are met: 1) The component is repaired or replaced, 2) The component is re-inspected, and, 3) The component is found to be in compliance with this Rule. [District Rule 4401, 5.9.2] Federally Enforceable Through Title V Permit

11. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401, 5.9.3] Federally Enforceable Through Title V Permit

12. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0, an operator shall comply with at least one of the following three requirements as soon as practicable but not later than the time period specified in Table 4: 1) Repair or replace the leaking component, 2) Vent the leaking component to a VOC collection and control system as defined in Section 3.0, or 3) Remove the leaking component from operation. [District Rule 4401, 5.9.4] Federally Enforceable Through Title V Permit

13. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 4. [District Rule 4401, 5.9.5] Federally Enforceable Through Title V Permit

14. The time of the initial leak detection shall be the start of the repair period specified in Table 4. [District Rule 4401, 5.9.6] Federally Enforceable Through Title V Permit

15. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401, 5.9.7] Federally Enforceable Through Title V Permit

16. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

17. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

18. An operator shall maintain an inspection log pursuant to Section 6.4. [District Rule 4401, 6.1.5] Federally Enforceable Through Title V Permit

19. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit

20. The operator shall maintain copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.7 and 6.1.8] Federally Enforceable Through Title V Permit

21. Any operator that has discovered that a pressure regulating device has released shall record the date that the release was discovered along with the identity and location of the release. All such records shall be submitted to the District within 60 days after the end of the calendar year. [District Rule 4401, 6.1.11] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
22. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 6.2] Federally Enforceable Through Title V Permit

23. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the concentration must be below 50 ppmv, in which case EPA Method 25a may be used. EPA Method 18 may be used instead, providing the requirements under Section 6.3.1 are met. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

24. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit

25. The operator shall test the casing gas annually for VOC content. [District Rule 2201] Federally Enforceable Through Title V Permit

26. VOC content shall be analyzed by using the latest revision of ASTM Method E168, E169, or E260 as applicable. Analysis of halogenated exempt compounds shall be performed by using ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

27. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91, or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401, 6.3.5] Federally Enforceable Through Title V Permit

28. The operator shall maintain an inspection log in which the operator records at least all of the following for each inspection performed: 1) The total number of components inspected, and the total number and percentage of leaking components found by component type, 2) The location, type and name or description of each leaking component and description of any unit where the leaking component is found, 3) The date of leak detection and the method of leak detection, 4) For gaseous leaks, the leak concentration in ppmv and, for liquids leaks, whether the leak is major or minor, 5) The date of repair, replacement or removal from operation of leaking components, 6) The identity and location of essential components and critical components as defined in this Rule, found leaking, that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier, 7) The methods used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than 1 year after detection, whichever comes earlier, 8) The date or re-inspection and the leak concentration in ppmv after the component is repaired or replaced, 9) The inspectors name, business mailing address, and business telephone number, and 10) The date and signature of the facility operator responsible for the inspection and repair program certifying the accuracy of the information recorded in the log. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit

29. The operator shall establish and implement an employee training program for inspecting and repairing components and recordkeeping procedures as necessary. [District Rule, 6.5] Federally Enforceable Through Title V Permit

30. By January 30 of each year, an operator shall submit to the APCO for approval, in writing, an annual report indicating any changes to an existing Operator Management Plan. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
31. The operator of any new steam-enhanced crude oil production well, or any nonsteam-enhanced crude oil production well converted to a steam-enhanced crude oil production well, which commences steam-enhancement operations on or after April 11, 1991, shall comply with the requirements of this rule and the applicable permit requirements of Rule 2201 (New and Modified Stationary Source Review Rule) before steam injection and no later than the first detectable flow at the casing vent. [District Rule 4401, 7.1] Federally Enforceable Through Title V Permit

32. Steam-enhanced crude oil production wells and components that are exempt pursuant to Section 4.3, 4.4, 4.5, 4.8 or 4.9 that become subject to this rule through loss of exemption status shall not be operated until such time that they are in full compliance with the requirements of this rule. [District Rule 4401, 7.2] Federally Enforceable Through Title V Permit

33. All records shall be maintained for a period of at least five years and made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-714-11

ISSUANCE DATE: 10/07/2010

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC

MAILING ADDRESS: PO BOX 11164

BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE

KERN COUNTY, CA

SECTION: 19  TOWNSHIP: 26S  RANGE: 21E

EQUIPMENT DESCRIPTION:

MODIFICATION OF TEOR OPERATION WITH UP TO 545 STEAM ENHANCED WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM AND SULFUR REMOVAL SYSTEM - LOST HILLS OIL FIELD (SEC. 12&13, T26S, R20E AND SEC. 18&19, T26S, R21E): REMOVE PERMIT CONDITIONS THAT REFERENCE EQUIPMENT NO LONGER IN SERVICE

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. Operation shall include fin fan heat exchanger and its associated components. [District NSR Rule] Federally Enforceable Through Title V Permit

4. The VOC content of the gas going through the fin fan heat exchanger and its associated components shall not exceed 10% by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
5. Operator shall conduct quarterly gas sampling for gas going through the fin fan heat exchanger and its associated components to qualify for exemption from fugitive component counts for components handling fluids with VOC content equal to or less than 10% by weight. Quarterly samplings shall be reduced to annual samplings if gas samples contain VOC content equal to or less than 10% by weight for eight (8) consecutive quarterly samplings. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC content of gas going through the fin fan heat exchanger and its associated components shall be determined by ASTM D1945, EPA Method 18 referenced as methane, or equivalent test method with prior District approval. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Permittee shall maintain a record of the VOC content test results for the gas going through the fin fan heat exchanger and its associated components for a period of five years and make such records available for inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Operation shall include vapor collection piping network serving District approved tanks at Lost Hills oil treatment plants. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Operation shall include vapor collection piping network serving District approved oil/water separation systems at Lost Hills oil treatment plants. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Operation shall include miscellaneous liquid knockout vessels (separators), heat exchangers, and vapor compressors. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Operation shall include vapor collection piping line interconnections and non-condensible casing gas piping to sulfur scrubbing systems. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Operation shall include at least one and no more than two sulfur scrubbing systems, each consisting of casing gas coolers and pumps, concurrent contactor vessels and separators, and chemical storage tanks. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Sulfur scrubbing system shall use District approved scrubbing agents, including but not limited to Exxon Sulfa Check, DOW Sulferox, WESCHEM Sulfarid, SulfaScrub, SulfaTreat, Caustic-based sulfur scrubbing systems, and Betz DX-1026 Formulations. Prior District approval shall be obtained for using alternative sulfur scrubbing agents not listed. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Scrubber regenerator vessel (if applicable) and sulfur bin ventilation (if applicable) shall, at each sulfur recovery unit, be vented to one or more of the District approved steam generators connected to desulfurized casing gas piping network. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Permittee shall maintain an updated listings (updated annually within 60 days of permit anniversary) of vapor control system equipment and permitted emissions units connected to this vapor control system and such listings shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Non-condensable gas from the vapor control system shall be scrubbed by sulfur scrubbing systems prior to incineration in steam generators S-1547-787 to -796, -825, and -830, or other District approved steam generators for TEOR gas incineration. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Wells producing to vapor-controlled tanks can be operated with the casing vents closed. [District NSR Rule] Federally Enforceable Through Title V Permit

19. All produced fluids from any well served by vapor collection system which has had its casing vent closed shall be handled only in closed production equipment served by a 99% efficient vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit

20. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to production wells for disposal, or pumped to vapor controlled storage tanks. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
21. Sulfur scrubbing systems shall be maintained to achieve, on average monthly basis, at least 90% control efficiency of all H2S entering the systems. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Particulate matter (PM10) emissions from TEOR gas incineration shall not exceed 17.1 lb/day (shared with all District approved steam generators). [District NSR Rule] Federally Enforceable Through Title V Permit

23. Emissions of Volatile Organic Compounds (VOC) shall not exceed 1,198.3 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions calculated using USEPA's 1995 Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017), or other District approved factors. [District NSR Rule] Federally Enforceable Through Title V Permit

25. Permittee shall maintain accurate daily records of gas sulfur content of non-condensable gas entering and leaving sulfur scrubbing systems to verify removal efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit

26. A leak is defined as the dripping of VOC-containing liquid or the detection of a concentration of total organic compound, above background, determined according to the test method specified in Section 6.3.3 that exceeds the values specified in Table 1, Section 3.20.2.1 and Section 3.20.2.2 of this rule. Any liquid or gas coming from a component undergoing repair or replacement, or during sampling of process fluid from a component into a container is not considered a leak provided such activities are done as expeditiously as possible and with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401, 3.20.2] Federally Enforceable Through Title V Permit

27. The crude oil production from wells associated with this permit unit shall not lie within 1,000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

28. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (Amended December 14, 2006). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

29. The inspection and re-inspection requirements set forth in Sections 5.8.1 through 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of 10% by weight or less. [District Rule 4401, 4.9] Federally Enforceable Through Title V Permit

30. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

31. Steam-enhanced crude oil production well vents shall be closed, except when temporarily opened during periods of attended service of repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, and the front line production equipment downstream of the wells that carry produced fluids be connected to a VOC collection and control system. Alternatively, steam-enhanced crude oil production well vents shall be open and the well vents connected to a VOC collection and control system. [District Rule 4401, 5.5.1] Federally Enforceable Through Title V Permit

32. The operator shall be in violation of Rule 4401 if any District inspection or operator inspection, conducted as a requirement of this rule, finds an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap, or a second closed valve that is not closed at all times, except during attended operations requiring process fluid flow through the open-ended lines. [District Rule 4401, 5.6.2.1] Federally Enforceable Through Title V Permit

33. The operator shall be in violation of Rule 4401 if any District inspection or operator inspection, conducted as a requirement of this rule, finds a component with a major liquid leak or gas leak greater than 50,000 ppmv. [District Rule 4401, 5.6.2.2 and 5.6.2.3] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
44. The operator shall repair minor gas leaks within 14 days, major gas leaks which less than or equal to 50,000 ppmv within 5 days., major gas leaks which are greater than 50,000 ppmv within two days, minor liquid leaks within 3 days, and major liquid leaks within 2 days. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period. The start of the repair period shall be the time of the initial leak detection. [District Rule 4401, 5.9.4, 5.9.5, and 5.9.6] Federally Enforceable Through Title V Permit

45. If a leaking component is an essential component or a critical component which cannot be shut down immediately for repairs, and after being minimized still exceeds the applicable leak standard, the operator shall repair or replace the component to eliminate the leak during the next process unit turnaround or no later than one year from the date of original leak detection, whichever is earlier. [District Rule 4401, 5.9.7] Federally Enforceable Through Title V Permit

46. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1.1] Federally Enforceable Through Title V Permit

47. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system. [District Rule 4401, 6.1.3] Federally Enforceable Through Title V Permit

48. The operator shall maintain an inspection log that has been signed and dated by the facility operator responsible for the inspection, certifying the accuracy of the information recorded in the log. The inspection log shall contain, at a minimum, all of the following information: 1) The total number of components inspected, and the total number and percentage of leaking components found by component types; 2) The location, type, name or description of each leaking component and the description of any unit where the leaking component is found; 3) Date of the leak detection and method of the leak detection; 4) For gaseous leaks, record the leak concentration in ppmv, and for liquid leaks record whether the leak is a major liquid leak or a minor liquid leak; 5) The date of repair, replacement, or removal from operation of the leaking component(s); 6) The identification and location of essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes first; 7) The method(s) used to minimize the leak from essential components and critical components found leaking that cannot be repaired until the next process unit turnaround or not later than one year after leak detection, whichever comes earlier; 8) The date of re-inspection and the leak concentration in ppmv after the component is repaired or is replaced; 9) The inspector's name, business mailing address, and business telephone number. [District Rule 4401, 6.4] Federally Enforceable Through Title V Permit

49. Records shall be maintained of each calibration of the portable hydrocarbon detection instrument utilized for inspecting components. The records shall include a copy of the current calibration gas certification from the vendor of the calibration gas cylinder, the date of calibration, the concentration of calibration gas, the instrument reading of calibration gas before adjustment, the instrument reading of calibration gas after adjustment, the calibration gas expiration date, and the calibration gas cylinder pressure at the time of calibration. [District Rule 4401, 6.1.6] Federally Enforceable Through Title V Permit

50. The operator shall maintain a copies of training records and of the latest APCO-approved Operator Management Plan (OMP) at the facility and make such available to the APCO, ARB, and US EPA upon request. [District Rule 4401, 6.1.7, 6.1.8] Federally Enforceable Through Title V Permit

51. Except as set forth elsewhere in this permit, the operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401, 6.2.1] Federally Enforceable Through Title V Permit

52. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual control efficiency testing requirement if all uncondensed VOC emissions collected by the vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare, or if the vapor collection and control does not have a VOC destruction device. [District Rule 4401, 6.2.2, 6.2.3] Federally Enforceable Through Title V Permit
34. The operator shall be in violation of Rule 4401 if any District inspection or operator inspection, conducted as a requirement of this rule, discovers minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv more than the following: 3 leaks for 1 - 25 wells, 6 leaks for 26 - 50 wells, 8 leaks for 51 - 100 wells, 10 leaks for 101 - 250 wells, 15 leaks for 251 - 500 wells, and 1 leak for each 20 wells (with a minimum of 50 wells test) for more than 500 wells connected to a VOC collection and control system. [District Rule 4401, 5.6.2.4] Federally Enforceable Through Title V Permit

35. Components that have been found leaking in excess of the applicable leak standards of this rule may be used provided such leaking components have been identified with a tag for repair, are repaired, or are awaiting re-inspection after being repaired, within the applicable time period specified in this permit. [District Rule 4401, 5.7.1] Federally Enforceable Through Title V Permit

36. Except for pipes and unsafe-to-monitor components, all other components shall be inspected pursuant to the requirements of section 6.3.3 at least once every year. [District Rule 4401, 5.8.1] Federally Enforceable Through Title V Permit

37. All pipes shall be visually inspected at least once every year. Any visual inspection of pipes that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected within 24 hours after detecting the leak. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.2] Federally Enforceable Through Title V Permit

38. The operator shall audio-visually (by hearing and by sight) inspect for leaks all accessible operating pumps, compressors, and PRDs in service at least once each calendar week. [District Rule 4401, 5.8.3.1] Federally Enforceable Through Title V Permit

39. Any audio-visual inspection of an accessible operating pump, compressor, and PRD performed by an operator that indicates a leak that cannot be immediately repaired to meet the leak standards of this rule shall be inspected not later than 24 hours after conducting the audio-visual inspection. If a leak is found, the leak shall be repaired as soon as practicable but not later than as allowed by Rule 4401 and specified in this permit. [District Rule 4401, 5.8.3.2] Federally Enforceable Through Title V Permit

40. The operator shall inspect all new, replaced, or repaired fittings, flanges, and threaded connections within 72 hours of placing the component in service. The operator shall inspect a component, other than PRDs, that has been repaired or replaced not later than 15 calendar days after the component was repaired or replaced. The operator shall inspect all unsafe-to-monitor components during each turnaround. [District Rule 4401, 5.8.4.2, 5.8.4.3, 5.8.5] Federally Enforceable Through Title V Permit

41. A District inspection in no way fulfills any of the mandatory inspection requirements that are placed upon operators and cannot be used or counted as an inspection required of an operator. [District Rule 4401, 5.8.6] Federally Enforceable Through Title V Permit

42. The operator, upon detection of a leaking component, shall affix to that component a weatherproof, readily visible tag, bearing the date and time when the leak was detected and the date and time of the leak measurement. For gaseous leaks, the tag shall indicate the leak concentration in ppmv. For liquid leaks, the tag shall indicate whether it is a major liquid leak or a minor liquid leak. The tag shall indicate, when applicable, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. The tag shall remain in place until the leaking component is repaired or replaced and reinspected and found to be in compliance with the requirements of this rule. [District Rule 4401, 5.9.1, 5.9.2] Federally Enforceable Through Title V Permit

43. The operator shall minimize all component leaks immediately, to the extent possible, but not later than one hour after detection of the leak in order to stop or reduce leakage to the atmosphere. Except for leaking critical components or leaking essential components, if the leak has been minimized but the leak still exceeds the applicable leak standards specified in this permit, the operator shall do one of the following within the timeframes specified within this permit: 1) repair or replace the leaking component; 2) vent the leaking component to a closed vent system; 3) or remove the leaking component from operation. A closed vent system is a District approved system that is not open to the atmosphere. It is composed of hard-piping, ductwork connections and, if necessary, flow inducing devices that transport gas or vapor from a piece or pieces of equipment to a District approved control device that has a overall VOC collection and destruction or removal efficiency of at least 95%, or that transports gases or vapors back to a process system. [District Rule 4401, 5.9.3, 5.9.4] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
53. An operator seeking approval of a waiver of the annual control efficiency testing requirement shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401, 6.2.4] Federally Enforceable Through Title V Permit

54. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- nor over-reported. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

55. VOC content shall be determined using the latest revision of ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by CARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

56. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401, 6.3.3] Federally Enforceable Through Title V Permit

57. The operator shall maintain an APCO approved Operator Management Plan (OMP). The OMP shall include, at a minimum, a description of all wells and all associated VOC collection and control systems subject to this rule, and all wells and all associated VOC collection and control systems that are exempt; an identification and description of any known hazard that might affect the safety of an inspector; except for pipes, the number of components that are subject to this rule by component type; except for pipes, the number and types of major components, inaccessible components, unsafe-to-monitor components, critical components, and essential components that are subject to this rule and the reason(s) for such designation; except for pipes, the location of components subject to the rule (components may be grouped together functionally by process unit or facility description); except for pipes, components exempt pursuant to Section 4.8 (except for components buried below ground) may be described in the OMP by grouping them functionally by process unit or facility description (the results of any laboratory testing or other pertinent information to demonstrate compliance with the applicable exemption criteria for components for which an exemption is being claimed pursuant to Sections 4.8 shall be submitted with the OMP); a detailed schedule of an operator's inspections of components to be conducted as required by this rule and whether the operator inspections of components required by this rule will be performed by a qualified contractor or by an in-house team; a description of the training standards for personnel that inspect and repair components; and a description of the leak detection training for conducting the test method specified in Section 6.3.3 for new operators, and for experienced operators, as necessary. [District Rule 4401, 6.6] Federally Enforceable Through Title V Permit

58. By January 30th of each year the operator shall submit to the District for approval, in writing, an annual report indicating any changes to the existing OMP on file at the District. [District Rule 4401, 6.7] Federally Enforceable Through Title V Permit

59. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
60. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended January 15, 1998), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

61. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

62. Note: Formerly S-1511-22
PERMIT UNIT REQUIREMENTS

1. Fugitive VOC emissions from all components associated with this operation shall not exceed 410.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Permittee shall maintain for a period of five years, accurate records of fugitive inspection component counts, leak screening values in excess of 10,000 ppm, and shall, as approved by the District, calculate fugitive emissions using February 1999 CAPCOA California Implementation Guidelines for Estimating Mass Emissions of Fugitive Hydrocarbon Leaks at Petroleum Facilities Table IV-2c. Permittee shall make records of component counts, screening values, and calculations readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Operation shall include liquid knockout vessels (separators), heat exchangers, and vapor compressors. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Operation shall include vapor collection piping network from this well vent vapor control system, well vent vapor control system S-1547-707, and tank battery vapor control system S-1547-843 to sulfur scrubbing systems (primary & standby). [District NSR Rule] Federally Enforceable Through Title V Permit

5. Permittee shall maintain a current roster of wells connected to the casing collection system, and such roster shall be made readily available for District inspection upon request [District NSR Rule] Federally Enforceable Through Title V Permit

6. Primary sulfur scrubbing system shall include casing gas coolers and pumps, contactor vessels and separators, regenerator section with heat exchangers, recirculation pump & air blower, and chemical storage tanks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Standby sulfur scrubbing system shall include contactor vessels and separators. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Sulfur scrubbing system(s) shall use District approved scrubbing agents including, Exxon Sulfa Check, DOW Sulfoxy, WESCHEM Sulfarid, SulfaScrub, and Betz DX-1026 Formulations. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Prior District approval shall be obtained for using alternative sulfur scrubbing agents other than those listed above. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Casing vapor collection system shall be equipped with vapor flow rate indicator/recorder downstream of condensation and sulfur removal equipment measuring total non-condensible vapor flow rate. [District NSR Rule] Federally Enforceable Through Title V Permit

11. All wells approved by this permit shall have the well head casing vents routed to the TEOR well vent vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
Permit Unit Requirements for S-1547-819-8 (continued) Page 2 of 4

12. Well casing vents may be closed provided produced fluids are handled only in production facilities with District-approved emission control systems achieving at least 99% control. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit

13. An inspection and maintenance program consistent with Rule 4403 for light oil production facilities shall be implemented for stuffing boxes and polish rods of 479 newly authorized steam drive wells (identified by well roster). [District NSR Rule] Federally Enforceable Through Title V Permit

14. Sulfur bin ventilation (if applicable) shall be vented to one or more of the District approved steam generators connected to desulfurized casing gas piping network. [District NSR Rule] Federally Enforceable Through Title V Permit

15. During temporary periods of maintenance covered in the permittee's bi-annual maintenance plan the permittee may conduct maintenance or repair activities contained in the District approved bi-annual maintenance plan without shutting-in production from wells served by the well vent vapor collection system, for no more than a total of 336 hours during any one calendar year for each system. Maintenance covered by the permittee's bi-annual maintenance plan may exceed 336 hours during any one calendar year when maintenance is performed while all casing well vents covered by this permit are closed. When multiple vapor recovery systems serve the same wells in series or in parallel, a total of 336 hours of maintenance shall be allowed for all systems combined. [District NSR Rule] Federally Enforceable Through Title V Permit

16. During temporary periods of maintenance covered in the permittee's bi-annual maintenance plan, well vent vapor recovery piping may be temporarily shut-in or isolated for routine maintenance or repair activities without closing the well vents normally served by a well vent vapor collection system provided that well vent vapors are routed to a vapor recovery system that complies with District rule 4401 and all otherwise applicable provisions of this permit. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit

17. Well vent vapor collection system piping and components shall be maintained as required by Rule 4401, and well vent vapors shall not be vented or bled-off to the atmosphere except for those actions necessary to safely isolate vessels and piping for routine maintenance. [District NSR Rule and District Rule 4401] Federally Enforceable Through Title V Permit

18. The District shall be notified at least 48 hours prior to the start of each maintenance program. No later than 10 days after completing each maintenance episode, the permittee shall notify the District in writing of the date, time, duration, well number(s), and description of the maintenance or repair activity completed. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Permittee shall maintain records of the date, time, and duration of each maintenance or repair episode requiring the temporary isolation of well vent vapor recovery piping. Such records shall include well identification numbers and a description of the maintenance or repair activity completed, and shall be maintained for a period of up to 5 years, and be made readily available to the District upon request. [District NSR Rule and District Rule 1070] Federally Enforceable Through Title V Permit

20. Permittee shall submit to the District bi-annual maintenance plans. The maintenance plan must identify each permit unit and illustrate them on a detailed map of the system, identify the period and duration of each maintenance episode for each system, an estimate of VOC emissions released during maintenance, and the procedures that will be used to maintain and isolate affected equipment. [District NSR Rule] Federally Enforceable Through Title V Permit

21. If unscrubbed sulfur rate exceeds 109.2 lb S/day, non-condensible gas shall be scrubbed by sulfur scrubbing systems prior to incineration in steam generators S-1547-766 to '772, '777 to'-781, or other District approved steam generators. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Liquid condensate from vapor recovery piping, condensation, and sulfur scrubbing systems shall be pumped to production manifold. [District NSR Rule] Federally Enforceable Through Title V Permit

23. Non-condensible gas from vapor control system shall not be vented to atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit

24. Maximum gas flow rate from well casing vent vapor control system shall not exceed 4.09 MMscf/day. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
25. Total mass flow rate of sulfur compounds from sulfur scrubbing systems shall not exceed 258.0 lb/day as S. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Permittee shall maintain accurate daily records of gas flow rate leaving sulfur scrubbing systems, and sulfur content (by daily gas sampling) of non-condensible gas entering and leaving sulfur scrubbing systems. [District NSR Rule] Federally Enforceable Through Title V Permit

27. If sulfur scrubbing systems are not utilized, permittee shall maintain accurate daily records of total unscrubbed sulfur mass flow rate and sulfur content (by daily gas sampling) of unscrubbed non-condensible gas. [District NSR Rule] Federally Enforceable Through Title V Permit

28. Particulate matter (as PM10) emissions from TEOR gas incineration shall not exceed 55.9 lb/day (shared with all District approved steam generators). [District NSR Rule] Federally Enforceable Through Title V Permit

29. A leak shall be defined as a reading on a portable hydrocarbon detection instrument (calibrated with methane) in excess on 10,000 ppmv when measured in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

30. The crude oil production from wells associated with this permit unit shall not produce from the same production zone in which an air injection well is completed and shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

31. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

33. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

34. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

35. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

36. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

37. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 14, 2006) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

38. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

39. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

40. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
4. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

42. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

43. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

44. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

45. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. Where safety is a concern, such as measuring leaks from a compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet a distance of one centimeter or less from the surface of the component interface. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

46. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

47. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

48. Note: Formerly S-1511-213
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-820-4
EXPIRATION DATE: 05/31/2007

SECTION: NW14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
TEOR OPERATION WITH 324 WELLS SERVED BY VAPOR CONTROL SYSTEM WITH LIQUID KNOCK-OUT VESSELS, HEAT EXCHANGERS, & COMPRESSORS, WITH VAPOR PIPING TO APPROVED INJECTION WELLS (MIDWAY SUNSET FIELD)

PERMIT UNIT REQUIREMENTS

1. Vapor control system shall include liquid knockout vessels, heat exchangers, and vapor compressors. [District NSR Rule] Federally Enforceable Through Title V Permit

2. All noncondensible vapors from vapor compressor(s) shall be piped to gas injection wells only. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Permittee shall reinject vapors into Department of Oil, Gas, and Geothermal Resources (DOGGR) approved gas injection wells only. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Permittee shall maintain a current roster of steam enhanced wells and DOGGR approved gas injection wells connected to the casing collection system, and such listing shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Water and VOC condensate from all liquid knockout drums shall be pumped to production system. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC emission rate shall not exceed 28.1 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

8. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

10. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

11. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

12. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

14. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

15. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 17, 1992) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

16. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

17. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

18. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

19. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

20. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

21. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

22. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

23. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

24. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
25. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Note: Formerly S-1511-219
PERMIT UNIT REQUIREMENTS

1. Vapor control system shall include liquid knockout vessels, heat exchangers, and vapor compressors. [District NSR Rule] Federally Enforceable Through Title V Permit

2. All noncondensible vapors from vapor compressor(s) shall be piped to gas injection wells only. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Permittee shall reinject vapors into Department of Oil, Gas, and Geothermal Resources (DOGGR) approved gas injection wells only. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Permittee shall maintain a current roster of steam enhanced wells and DOGGR approved gas injection wells connected to the casing collection system, and such listing shall be made readily available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Water and VOC condensate from all liquid knockout drums shall be pumped to production system. [District NSR Rule] Federally Enforceable Through Title V Permit

6. VOC emission rate shall not exceed 3.14 lb/(well x day). [District NSR Rule] Federally Enforceable Through Title V Permit

7. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

8. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

9. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

10. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

11. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

12. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
13. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

14. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

15. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 17, 1992) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

16. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

17. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

18. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

19. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

20. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

21. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

22. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

23. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

24. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
25. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. Note: Formerly S-1511-222
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-823-5
EXPIRATION DATE: 05/31/2007

SECTION: SW25  TOWNSHIP: 32S  RANGE: 23E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY SYSTEM SERVING 40 STEAM DRIVE WELLS, INCLUDING: LIQUID KNOCKOUT VESSELS, HEAT EXCHANGERS, AND COMPRESSORS. - SOUTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. Uncondensed casing vapors shall be piped to sulfur scrubbing system S-1547-824 or as allowed below. [District NSR Rule] Federally Enforceable Through Title V Permit

2. As alternative control, well casing vents may be closed individually provided they are served only by production facilities with District-approved emission control systems which reduce uncontrolled VOC emissions by at least 99 percent by weight. [District Rule 4401] Federally Enforceable Through Title V Permit

3. As alternative control, well casing vents may be tied together in a balanced system between wells provided they are served by production facilities with District-approved emission control systems which reduce uncontrolled VOC emissions by at least 99 percent by weight. [District Rule 4401] Federally Enforceable Through Title V Permit

4. Water/VOC condensate from all liquid knockout drums shall be pumped to production manifold. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Emissions from the TEOR operation shall not exceed the following limit: VOC - 5.23 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

7. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

8. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

9. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

10. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

11. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
6-1547-823-5: Jul 11 2011 2 05PM - GOUGH
12. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

13. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

14. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 17, 1992) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

15. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

16. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

17. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

18. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

19. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

20. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.2.2] Federally Enforceable Through Title V Permit

21. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 432. [District Rule 4401, 6.2.3] Federally Enforceable Through Title V Permit

22. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.2.4] Federally Enforceable Through Title V Permit

23. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
24. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

25. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. A listing of all steam enhanced wells connected to this system shall be submitted to the District at least 60 days prior to the permit anniversary date. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

27. Note: Formerly S-1511-228
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-838-2
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
40 UNCONTROLLED CYCLICALLY STEAMED ENHANCED CRUDE OIL PILOT TESTING WELLS. - VARIED LOCATIONS

PERMIT UNIT REQUIREMENTS

1. Any changes to the number of uncontrolled cyclically steamed oil production wells in the Western Heavy Oil Stationary Source shall require an Authority to Construct. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Permittee shall maintain current roster of all open vent cyclically steamed wells that have been steamed within the previous 5 years being operated under this permit & such roster shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Cyclic wells undergoing pilot testing, or exempt pursuant to Rule 4401 section 4.5.1, shall be located more than 1,000 feet from any existing well vent vapor recovery system operated by permittee. [District Rule 4401, 4.5.1] Federally Enforceable Through Title V Permit

4. Well roster shall include identification of all uncontrolled cyclic wells undergoing pilot testing. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Total number of uncontrolled cyclic wells undergoing pilot testing (exempt from control requirements pursuant to Rule 4401 section 4.3) shall not exceed 40. [District Rule 4401, 4.3] Federally Enforceable Through Title V Permit

6. Wells undergoing pilot testing shall not produce from a zone on that property that has been injected with steam during the preceding two years. [District Rule 4401, 4.3.1] Federally Enforceable Through Title V Permit

7. Pilot testing of wells for the purpose of determining the viability of developing a steam-enhanced production zone shall not exceed 180 days for each production zone. [District Rule 4401, 3.7] Federally Enforceable Through Title V Permit

8. Total number of uncontrolled cyclic wells exempt from control requirements pursuant to Rule 4401 section 4.5 shall not exceed 20. [District Rule 4401, 4.5] Federally Enforceable Through Title V Permit

9. Note: Formerly S-1511-258

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. VOC control efficiency shall be maintained at no less than 99% by weight. [District Rule 4401] Federally Enforceable Through Title V Permit

2. There shall be no more than 8 leaks as defined by Rule 4401 for entire operation. [District Rule 4401] Federally Enforceable Through Title V Permit

3. All piping, valves, and fittings/connectors shall be constructed and maintained in a leak-free condition as defined in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

4. Leaks shall be inspected and repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

5. Number of TEOR wells served by vapor control system shall not exceed 69 wells. [District Rule 2201] Federally Enforceable Through Title V Permit

6. VOC emission rate from steam enhanced wells shall not exceed 2.21 lb/day. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All condensate from each liquid knock-out drum shall be pumped only to production system. [District Rule 2201] Federally Enforceable Through Title V Permit

Compliance with Rule 4401 may achieved by the closing of well casing vents provided the wells are served only by production facilities with District approved emission control systems achieving at least 99% control. [District Rule 2201 & Rule 4401] Federally Enforceable Through Title V Permit

8. Compliance with Rule 4401 may be achieved by injection of vapor control system gas into Department of Oil, Gas, and Geothermal Resources (DOGGR) approved injection wells. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Permittee shall maintain a current listing of all steam enhanced wells and DOGGR approved gas injection wells connected to this system and shall make this list readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

10. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

11. The crude oil production from wells associated with this permit unit shall not lie within 1000 feet of an air injection well used for in-situ combustion. [District Rule 4407, 2.0, 3.4, and 3.5] Federally Enforceable Through Title V Permit

12. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
Permit Unit Requirements for S-1547-912-5 (continued)

14. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

15. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

16. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

17. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

18. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

19. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

20. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

21. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

22. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

23. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.3.2] Federally Enforceable Through Title V Permit

24. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

25. VOC content shall be determined using ASTM Method E168-67, E169-63, or E260-73 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

26. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit
27. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. All records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-445
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1063-6
EXPIRATION DATE: 05/31/2007

SECTION: 13  TOWNSHIP: 26S  RANGE: 20E

EQUIPMENT DESCRIPTION:
THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 146 STEAM-ENHANCED WELLS WITH CLOSED CASING VENTS (TAYLOR LEASE)

PERMIT UNIT REQUIREMENTS

1. Total uncontrolled VOC emissions from all well vents shall be reduced by at least 99%. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Well authorized by this permit shall only be operated with closed casing vents. Well casing vents shall remain closed at all times except during periods of actual service or repair [District NSR Rule] Federally Enforceable Through Title V Permit

3. All produced fluids from all wells authorized by this permit shall be handled only in closed production equipment served by a 99% efficient vapor control system. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Permittee shall maintain with the permit a listing (updated annually within 60 days of permit anniversary) of all steam-enhanced wells authorized by this permit and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Emissions of Volatile Organic Compounds (VOC) shall not exceed 101.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Permittee shall maintain with the permit accurate fugitive component counts and resulting emissions according to Table 2-4 (Oil and Gas Production Operations Average Emission Factors) of USEPA's protocol for Equipment Emission Estimates - EPA-4531R-95-017. [District Rule 2201] Federally Enforceable Through Title V Permit

7. All valves, fittings and connectors serving closed well vents shall be constructed and maintained in a leak free condition except as provided below. [District NSR Rule & 4401] Federally Enforceable Through Title V Permit

8. Components shall be inspected and leaks repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

9. The number of leaks from the valves, fittings and connectors serving closed well vents shall not exceed the number allowed by Rule 4401 at any one time. [District Rule 4401] Federally Enforceable Through Title V Permit

10. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

11. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

12. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

14. The operator shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

15. Units consisting of more than 500 wells shall not exceed one leak detected for each 20 wells tested with a minimum of 50 wells tested. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

16. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

17. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

18. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

19. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

20. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

21. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

22. All records shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1079-16
EXPIRATION DATE: 05/31/2007

SECTION: 30  TOWNSHIP: 28S  RANGE: 21E

EQUIPMENT DESCRIPTION:
THERMALLY-ENHANCED OIL RECOVERY OPERATION WITH 131 STEAM DRIVE WELLS WITH CASING VENT VAPOR COLLECTION AND CONTROL SYSTEM INCLUDING TWO AIR-COOLED HEAT EXCHANGERS AND TWO GAS COMPRESSORS

PERMIT UNIT REQUIREMENTS

1. Permittee shall maintain an accurate fugitive component count and resultant emissions calculated using U.S. EPA Publication 453/R-95-017, Table 2-4. [District Rule 2201] Federally Enforceable Through Title V Permit

2. All seams, joints, piping, valves and fittings on the well vent vapor control system shall be constructed and maintained in a leak free condition except as provided below. [District Rule 4401] Federally Enforceable Through Title V Permit

3. Components shall be inspected and leaks repaired as specified in Rule 4401. [District Rule 4401] Federally Enforceable Through Title V Permit

4. Vapors collected from the well vent vapor collection and control system shall either be piped to the field gas gathering system, or the 2038 or 2972 steam plant (2038 consists of units S-1547-57, 59, 60, 61, 120, and 250; 2972 consists of units S-1547-77, 78, 123, 124, 135, 136, and 146), or TEOR system S-1547-359, or to DOGGR-approved injection wells. Alternatively, the wells can be operated with the casing vents closed. [District NSR Rule] Federally Enforceable Through Title V Permit

5. All produced fluids from any well served by vapor collection system which has had casing gas flow restricted or casing vent closed shall be handled only in closed production equipment served by 99% effective vapor control system. [District NSR Rule, 4401] Federally Enforceable Through Title V Permit

6. Water/VOCs condensate from all liquid knockout drums shall be pumped to production manifold, recycled to productions wells for disposal, or pumped to vapor controlled storage tanks. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Emissions of volatile organic compounds (VOC) shall not exceed 236.4 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

8. Permittee shall maintain with the permit a listing (updated each calendar year) of all steam-enhanced wells connected to the casing vent control system and such listing shall be made available for District inspection upon request. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Gas leak shall be defined as emitting more than 10,000 ppm of methane measured at a distance of one centimeter from the potential source with an instrument calibrated with methane in accordance with EPA Method 21. [District Rule 4401, 3.4] Federally Enforceable Through Title V Permit

10. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 17, 1992). [District Rule 4401, 4.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081 and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

12. The operator shall maintain monitoring records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401, 6.1] Federally Enforceable Through Title V Permit

13. The uncontrolled VOC emissions from any well vent shall be reduced by at least 99 percent by weight or, if several steam-enhanced crude oil production well vents are connected to a vapor collection and control system, total uncontrolled VOC emissions shall be reduced by at least 99 percent. This requirement does not apply to cyclic wells located on contiguous and adjacent oil production properties with less than 10 cyclic wells owned by or under the control of a company. [District Rule 4401, 5.1 and 5.2] Federally Enforceable Through Title V Permit

14. For cyclic wells located on properties with less than 10 cyclic wells and owned by a company, the uncontrolled VOC emissions from any well vent or system of well vents connected to a single control device shall be reduced by at least 50 percent. Properties shall include contiguous and adjacent oil production properties owned by or under control of the company. [District Rule 4401, 5.4] Federally Enforceable Through Title V Permit

15. Total number of leaks from the vapor collection and control system, including condensate handling, shall not exceed the number as allowed by Rule 4401 (as amended December 17, 1992) at any one time. [District Rule 4401, 5.3] Federally Enforceable Through Title V Permit

16. Operator shall affix a readily visible tag bearing the date on which a leak is detected. The tag shall remain in place until the leaking component is repaired. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

17. Operator shall repair each leak within 15 days of detection. The APCO may grant a 10 day extension if the operator demonstrates that the necessary and sufficient actions have and are being taken to correct the leak. [District Rule 4401, 5.3.1] Federally Enforceable Through Title V Permit

18. Operator shall maintain all components of a well vent vapor collection and control system in good repair. Components of the well vent vapor collection and control system shall include all piping, valves, fittings, pumps, compressors, tanks, etc. used to collect, control, store, or dispose of VOC condensate or non-condensable VOCs and which is prior to any blending of VOC condensate with crude oil or blending of non-condensable VOCs with gases to be used as a fuel. [District Rule 4401, 5.3 and 5.3.2] Federally Enforceable Through Title V Permit

19. Annual control efficiency compliance tests shall be performed on all vapor collection and control systems used to control emissions from steam-enhanced crude oil production wells. Testing shall be performed by ARB certified contractors during June, July, August or September of each year if the system's control efficiency is dependent upon ambient air temperature. The APCO may waive the requirements of this condition if the vapor control system does not exhaust to atmosphere or if all uncondensed VOC emissions collected by a vapor collection and control system are burned in fuel burning equipment or in a smokeless open flare and the source's Operating Permit contains adequate periodic monitoring to ensure the source meets 99% control efficiency. [District Rule 4401, 5.1, 5.2 and 6.2.1] Federally Enforceable Through Title V Permit

20. The control efficiency of systems designed to control VOC emissions from steam enhanced crude oil production well shall be determined by mass balance based on recognized emission factors for components and number of components; and the efficiency of destruction devices determined by EPA Method 25, 25a, or 25b as applicable. [District Rule 4401, 6.3.1] Federally Enforceable Through Title V Permit

21. VOC content shall be determined using ASTM Method E168, E169, or E260 as applicable. Halogenated exempt compounds shall be determined by ARB Method 422. [District Rule 4401, 6.3.2] Federally Enforceable Through Title V Permit

22. The source shall perform leak inspections at least annually, using a portable hydrocarbon detection instrument in accordance with EPA Method 21. [District Rules 2520, 9.4.2 and 4401, 6.3.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
23. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

24. Compliance with permit conditions in the Title V permit shall be deemed compliance with SJVUAPCD Rule 4401 (Amended December 17, 1992), formerly District Rule 465.1, excluding sections 5.1 and 5.2 for control systems which have been waived from complying with the requirement of section 6.2.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

25. The requirements of SJVUAPCD Rule 4407 (Adopted May 19, 1994) do not apply to this permit unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. All records of required monitoring data and support information shall be maintained and made readily available for District inspection upon request for a period of five years. [District Rule 1070] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1209-0
EXPIRATION DATE: 05/31/2007
SECTION: NW 36 TOWNSHIP: 27S RANGE: 20E
EQUIPMENT DESCRIPTION:
TWO THERMALLY ENHANCED OIL RECOVERY WELLS WITH BEAM-DRIVEN CASING GAS COMPRESSORS OPERATED WITH PRODUCED GAS ROUTED TO PRODUCED FLUID LINE (BELRIDGE OIL FIELD)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. Produced gas shall be routed to produced fluid line prior to entering crude oil storage tanks. [District Rules 2201 and 4401]

3. All produced fluids (gas, water, oil) from TEOR wells shall be sent to tanks served by a vapor control system with 99% control efficiency. [District Rule 2201]

4. Permittee shall implement an I&M program consistent with all applicable requirements of Rule 4401. [District Rule 4401]

5. The VOC content of the casing gas shall not exceed 10% by weight. [District Rule 2201]

6. Operator shall conduct quarterly sampling of the well casing gas. If the gas sampled is 10% or less VOC by weight for eight consecutive quarterly samplings, the sampling frequency shall only be required annually. If a test shows noncompliance with the percent VOC requirement, the source must return to quarterly testing until eight consecutive quarters show compliance. [District Rule 2201]

7. During the time any steam-enhanced crude oil production well is undergoing service or repair while the well is not producing, it shall be exempt from the emission control requirements of District Rule 4401, 5.0 (as amended December 14, 2006). [District Rule 4401, 4.1]

8. The annual inspection requirements of Section 5.8.1 through Section 5.8.5 of Rule 4401 shall not apply to components exclusively handling gas/vapor or liquid with a VOC content of ten percent by weight (10 wt %) or less, as determined by the test methods in Section 6.3.5 of Rule 4401. [District Rule 4401 4.9]

9. An operator shall not operate a steam-enhanced crude oil production well unless the operator complies with the following requirements: The steam-enhanced crude oil production well vent is closed and the front line production equipment downstream of the wells that carry produced fluids (crude oil or mixture of crude oil and water) is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401, the well vent may be temporarily opened during periods of attended service or repair of the well provided such activity is done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere, the steam-enhanced crude oil production well vent is open and the well vent is connected to a VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401, 5.5.1 and 5.5.2]

10. An operator shall be in violation of this rule if any District inspection demonstrates the existence of a component with a major liquid leak, a component with a gas leak greater than 50,000 ppmv, or an open-ended line or a valve located at the end of the line that is not sealed with a blind flange, plug, cap or a second closed valve that is not closed at all times, except during attended operations as defined by Section 5.6.2.1 of Rule 4401 requiring process fluid flow through the open-ended lines. [District Rule 4401 5.6.2]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Gas and liquid leaks are as defined in Section 3.20 of Rule 4401. [District Rule 4401 3.20]

12. An operator shall be in violation of this rule if any District inspection demonstrates the existence of any combination of components with minor liquid leaks, minor gas leaks, or gas leaks greater than 10,000 ppmv up to 50,000 ppmv that totals more than number of leaks allowed by Table 3 of Rule 4401. [District Rule 4401 5.6.2]

13. An operator shall not use any component with a leak as defined in Section 3.0 of Rule 4401, or that is found to be in violation of the provisions of Section 5.6.2 of Rule 4401. However, components that were found leaking may be used provided such leaking components have been identified with a tag for repair, are repaired, or awaiting re-inspection after being repaired within the applicable time frame specified in Section 5.9 of Rule 4401. [District Rule 4401 5.7.1]

14. Each hatch shall be closed at all times except during sampling or adding of process material through the hatch, or during attended repair, replacement, or maintenance operations, provided such activities are done as expeditiously as possible with minimal spillage of material and VOC emissions to the atmosphere. [District Rule 4401 5.7.2]

15. An operator shall comply with the requirements of Section 6.7 of Rule 4401 if there is any change in the description of major components or critical components. [District Rule 4401 5.7.3]

16. An operator shall affix a readily visible weatherproof tag to a leaking component upon detection of the leak and shall include the following information on the tag: date and time of leak detection, date and time of leak measurement, for a gaseous leak, the leak concentration in ppmv, for a liquid leak, whether it is a major liquid leak or a minor liquid leak, whether the component is an essential component, an unsafe-to-monitor component, or a critical component. [District Rule 4401 5.9.1]

17. An operator shall keep the tag affixed to the component until an operator has met all of the following conditions: repaired or replaced the leaking component, re-inspected the component using the test method in Section 6.3.3, and 5.9.2.3 of Rule 4401, or the component is found to be in compliance with the requirements of this rule. [District Rule 4401 5.9.2]

18. An operator shall minimize a component leak in order to stop or reduce leakage to the atmosphere immediately to the extent possible, but not later than one (1) hour after detection of the leak. [District Rule 4401 5.9.3]

19. Except for leaking critical components or leaking essential components subject to the requirements of Section 5.9.7 of Rule 4401, if an operator has minimized a leak but the leak still exceeds the applicable leak limits as defined in Section 3.0 of Rule 4401, an operator shall comply with at least one of the following requirements as soon as practicable but not later than the time period specified in Table 4 of Rule 4401: Repair or replace the leaking component; or vent the leaking component to a VOC collection and control system as defined in Section 3.0 of Rule 4401, or remove the leaking component from operation. [District Rule 4401 5.9.4]

20. The repair period in calendar days shall not exceed 14 days for minor gas leaks, 5 days for major gas leaks less than or equal to 50,000 ppmv, 2 days for gas leak greater than 50,000 ppmv, 3 days for minor liquid leaks, 2 days for major liquid leaks. [District Rule 4401 5.9.4]

21. The leak rate measured after leak minimization has been performed shall be the leak rate used to determine the applicable repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.5]

22. The time of the initial leak detection shall be the start of the repair period specified in Table 4 of Rule 4401. [District Rule 4401 5.9.6]

23. If the leaking component is an essential component or a critical component that cannot be immediately shut down for repairs, and if the leak has been minimized but the leak still exceeds the applicable leak standard of this rule, the operator shall repair or replace the essential component or critical component to eliminate the leak during the next process unit turnaround, but in no case later than one year from the date of the original leak detection, whichever comes earlier. [District Rule 4401 5.9.7]

24. The operator of any steam-enhanced crude oil production well shall maintain records of the date and well identification where steam injection or well stimulation occurs. [District Rule 4401 6.1.1]

25. An operator of any steam-enhanced crude oil production well shall keep source test records which demonstrate compliance with the control efficiency requirements of the VOC collection and control system as defined in Section 3.0 of Rule 4401. [District Rule 4401 6.1.3]
26. The results of source tests conducted pursuant to Section 4.6.2 of Rule 4401 shall be submitted to the APCO within 60 days after the completion of the source test. [District Rule 4401 6.1.4]

27. An operator shall maintain copies at the facility of the training records of the training program operated pursuant to Section 6.5 of Rule 4401. [District Rule 4401 6.1.7]

28. Operator shall keep a copy of the APCO-approved Operator Management Plan at the facility. [District Rule 4401 6.1.8]

29. An operator that discovers that a PRD has released shall record the date that the release was discovered, and the identity and location of the PRD that released. An operator shall submit such information recorded during the calendar year to the APCO no later than 60 days after the end of the calendar year. [District Rule 4401 6.1.11]

30. An operator shall source test annually all vapor collection and control systems used to control emissions from steam-enhanced crude oil production well vents to determine the control efficiency of the device(s) used for destruction or removal of VOC. Compliance testing shall be performed annually by source testers certified by ARB. Testing shall be performed during June, July, August, or September of each year if the system's control efficiency is dependent upon ambient air temperature. [District Rule 4401 6.2.1]

31. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 if all uncondensed VOC emissions collected by a vapor collection and control system are incinerated in fuel burning equipment, an internal combustion engine or in a smokeless flare. [District Rule 4401 6.2.2]

32. If approved by EPA, ARB, and the APCO, an operator need not comply with the annual testing requirement of Section 6.2.1 for a vapor control system which does not have a VOC destruction device. [District Rule 4401 6.2.3]

33. An operator seeking approval pursuant to Section 6.2.2 or Section 6.2.3 shall submit a written request and supporting information to the APCO. The District shall evaluate the request and if approved by the APCO, the District shall provide EPA and ARB with a copy of the evaluation and shall request EPA and ARB approval. The District evaluation and the APCO request shall be deemed approved unless EPA or ARB objects to such approval in writing within 45 days of the receipt of the APCO request. [District Rule 4401 6.2.4]

34. An operator shall comply with the following requirements for each gauge tank, as defined in Section 3.17 of Rule 4401: Conduct an initial TVP testing of the produced fluid in each gauge tank not later than June 14, 2007. Thereafter, an operator shall conduct periodic TVP testing of each gauge tank at least once every 24 months during summer (July - September), and whenever there is a change in the source or type of produced fluid in the gauge tank. The TVP testing shall be conducted at the actual storage temperature of the produced fluid in the gauge tank using the applicable TVP test method specified in Section 6.4 of Rule 4623 (Storage of Organic Liquids). The operator shall submit the TVP testing results to the APCO as specified in Section 6.1.10 of Rule 4401. [District Rule 4401 6.2.5]

35. The control efficiency of any VOC control device, measured and calculated as carbon, shall be determined by EPA Method 25, except when the outlet concentration must be below 50 ppm in order to meet the standard, in which case EPA Method 25a may be used. EPA Method 18 may be used in lieu of EPA Method 25 or EPA Method 25a provided the identity and approximate concentrations of the analytes/compounds in the sample gas stream are known before analysis with the gas chromatograph and the gas chromatograph is calibrated for each of those known analyte/compound to ensure that the VOC concentrations are neither under- or over-reported. [District Rule 4401 6.3.1]

36. Leak inspection, other than audio-visual, and measurements of gaseous leak concentrations shall be conducted according to EPA Method 21 using an appropriate portable hydrocarbon detection instrument calibrated with methane. The instrument shall be calibrated in accordance with the procedures specified in EPA Method 21 or the manufacturer's instruction, as appropriate, not more than 30 days prior to its use. The operator shall record the calibration date of the instrument. Where safety is a concern, such as measuring leaks from compressor seals or pump seals when the shaft is rotating, a person shall measure leaks by placing the instrument probe inlet at a distance of one (1) centimeter or less from the surface of the component interface. [District Rule 4401 6.3.3]

37. The VOC content by weight percent (wt.%) shall be determined using American Society of Testing and Materials (ASTM) D1945 for gases and South Coast Air Quality Management District (SCAQMD) Method 304-91 or the latest revision of ASTM Method E168, E169 or E260 for liquids. [District Rule 4401 6.3.5]
38. All records of required monitoring data and support information shall be maintained for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 2520, 9.4.2 and 4401, 6.1]
GAS TURBINES, IC ENGINES, FLARES & GAS DISPENSING OPERATION
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-148-20
SECTION: 32 TOWNSHIP: 28S RANGE: 21E
EXPIRATION DATE: 05/31/2007

EQUIPMENT DESCRIPTION:
21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #1 WITH GENERAL ELECTRIC MODEL LM2500
PE GAS TURBINE AND UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR: RETROFIT THE UNFIRED
WASTE HEAT RECOVERY STEAM GENERATOR AND THE BYPASS STACK WITH SELECTIVE CATALYTIC
REDUCTION (SCR) AND AMMONIA INJECTION FOR RULE 4703 COMPLIANCE AND ALLOW 60-DAY PERIOD TO
TEST AND ADJUST SCR AND AMMONIA INJECTION SYSTEM

PERMIT UNIT REQUIREMENTS

1. The operator shall establish the minimum ammonia injection rate required to meet the applicable Rule 4703 NOx
emission rate at the time of startup emission testing. The minimum injection rate shall be reported to the District and
the injection rate shall be monitored by the operator during CEM breakdowns to demonstrate NOx emission
compliance. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

2. Fuel consumption shall not exceed 5,650 MMBtu/day of fuel gas. [District NSR Rule] Federally Enforceable Through
Title V Permit

3. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 19451. [District Rule
4703, 6.4.5] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally
Enforceable Through Title V Permit

5. NOx emissions shall not exceed 75 ppmv @ 15% O2 (one-hour rolling average in accordance with 40 CFR 60.13(h)).
[40 CFR 60.332(b)] Federally Enforceable Through Title V Permit

6. During shakedown (not including startup, shutdown, and reduced load periods), NOx emissions (three-hour rolling
average) from the gas turbine shall not exceed 0.147 lb/MMBtu (equivalent to 40 ppmv @ 15% O2). [District Rule
4703, 5.1 and 7.2] Federally Enforceable Through Title V Permit

7. This is a BARCT Offset emission unit. For the purposes of Actual Emission Reduction calculations only, this unit
shall be considered to have NOx emissions of 20.6 ppmv @ 15% oxygen. [District Rule 4501] Federally Enforceable
Through Title V Permit

8. After shakedown, (Except during startup, shutdown, and reduced load), NOx emissions (three-hour rolling average)
from the gas turbine shall not exceed 0.011 lb/MMBtu (equivalent to 3 ppmv @ 15% O2). [District Rule 4703, 5.1 and
7.2] Federally Enforceable Through Title V Permit

9. CO emissions (three-hour rolling average) from the gas turbine engine shall not exceed 0.076 lb/MMBtu (equivalent to
33.9 ppmvd @15% O2). [District NSR Rule and District Rule 4703, 5.2] Federally Enforceable Through Title V
Permit

10. Emission rates from the gas turbine engine shall not exceed any of the following: 0.016 lb-PM10/MMBtu, 0.010 lb-
SOx/MMBtu, or 0.008 lb-VOC/MMBtu. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
11. On days of gas turbine engine startup/shutdown, permittee shall demonstrate compliance with NOx daily emission limitation by records of calculations using CEM data, fuel rate data, and daily hours of operation data. [District Rule 1080] Federally Enforceable Through Title V Permit

12. Maximum daily emission limitations (DEL) shall not exceed any of the following: 56.5 lb-SOx/day, 90.4 lb-PM10/day, 429.4 lb-CO/day, or 45.2 lb-VOC/day. [District NSR Rule] Federally Enforceable Through Title V Permit

13. The ammonia injection rate shall not exceed 25 lb/hr. [District Rule 4102]

14. During shakedown, NOx emissions shall not exceed 830.5 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

15. After shakedown, NOx emissions shall not exceed 190.2 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Shakedown shall be defined as the period from startup to the earlier of the following dates: 60 calendar days after initial startup, 90 calendar days after Major Overhaul, or April 30, 2008. [District NSR Rule and Rule 4703, 7.2.4] Federally Enforceable Through Title V Permit

17. Startup shall be defined as the period of time, not to exceed two hours, during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. [District Rule 4703, 3.24 and 5.3] Federally Enforceable Through Title V Permit

18. Shutdown shall be defined as the period of time, not to exceed two hours, during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4703, 3.21 and 5.3] Federally Enforceable Through Title V Permit

19. Reduced Load Period shall be defined as the time, not to exceed one hour, during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate. [District Rule 4703, 3.19 and 5.3] Federally Enforceable Through Title V Permit

20. Major Overhaul shall be defined as taking a stationary gas turbine out of service to replace or repair major components of the turbine. Major overhaul does not include taking a stationary gas turbine out of service exclusively to install emission control equipment. [District Rule 4703, 3.13] Federally Enforceable Through Title V Permit

21. Permittee shall report the following emission exceedances to the District: NOx emission rate on a three-hour average and daily NOx emissions during days of gas turbine engine startup/shutdown or reduced load. [District Rule 1080] Federally Enforceable Through Title V Permit

22. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081] Federally Enforceable Through Title V Permit

23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

24. Permittee shall maintain accurate daily records of fuel gas consumption and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1081] Federally Enforceable Through Title V Permit

25. The owner or operator shall certify, maintain, operate and quality-assure a system which continuously measures and records the exhaust gas oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, 40 CFR 60.334(b), District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

26. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit
27. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

28. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

29. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b), District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

30. Permittee shall submit reports of excess emissions for all periods of unit operation, including startup, shutdown, and malfunction in accordance with 40 CFR 60.344(j). [40 CFR 60.334(j)] Federally Enforceable Through Title V Permit

31. Permittee shall submit a CEMS written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR 60.334(j), (j)(5), District Rule 1080, 8.0 and District Rule 2520, 9.6.1 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

32. Excess emissions shall be defined as any consecutive 2-hour period during which the average emissions of NOx and CO, as measured by continuous monitoring system exceeds the concentration emissions limits set forth for these pollutants. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

33. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

34. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

35. Gas turbine engine shall be fired exclusively on PUC-regulated or FERC-regulated natural gas or natural gas with sulfur content no greater than 0.8% by weight. [40 CFR 60.333] Federally Enforceable Through Title V Permit

36. If the turbine is not fired on PUC-regulated or FERC-regulated natural gas, the sulfur content of the fuel shall be tested in accordance with 40 CFR 60.344(i). [40 CFR 60.344(i)] Federally Enforceable Through Title V Permit

37. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. [40 CFR 60.335(b), District Rule 4703, 6.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

38. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335 and District Rules 1081, 4703, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

39. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA

These terms and conditions are part of the Facility-wide Permit to Operate.
40. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

41. Daily records of NOx and CO emission calculations during days of startup/shutdown or reduced load shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

42. CO emissions shall not exceed (lbs/hr) (three-hour average) = 38-(0.2)*(ambient air temperature in °Fahrenheit) (not to exceed 30 lbs/hr) and (ppmv) = 1.86*(lbs/hr) @ 15% O2 (not to exceed 55.8 ppmv). [PSD SJ 85-03] Federally Enforceable Through Title V Permit

43. Permittee shall operate and maintain a continuous monitoring system to measure the ambient air temperature. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

44. Permittee shall operate and maintain a water injection system and instrumentation to continuously monitor and record levels of consumption of fuel and water. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

45. EPA Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable PSD emissions limits. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

46. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

49. Permittee shall maintain records of the following: 1) the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the permit unit; 2) performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS; and 3) emission measurements. [District Rules 1080, 7.3; 2520, 9.4.2; 4703, 6.2.8] Federally Enforceable Through Title V Permit

50. The owner or operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, and quantity and heat input of fuel used. [District Rule 4703, 6.2.6] Federally Enforceable Through Title V Permit

51. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 3, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-149-19  
EXPIRATION DATE: 05/31/2007

SECTION: 32  
TOWNSHIP: 28S  
RANGE: 21E

EQUIPMENT DESCRIPTION:
21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #2 WITH GENERAL ELECTRIC MODEL LM2500 
PE GAS TURBINE, UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR EQUIPPED WITH SCR AND AMMONIA 
INJECTION, AND BYPASS STACK EQUIPPED WITH SCR AND AMMONIA INJECTION

PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.0] Federally 
   Enforceable Through Title V Permit

2. The operator shall establish the minimum ammonia injection rate required to meet the applicable Rule 4703 NOx 
   emission rate at the time of startup emission testing. The minimum injection rate shall be reported to the District and 
   the injection rate shall be monitored by the operator during CEMS breakdowns to demonstrate NOx emission 
   compliance. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

3. Fuel consumption shall not exceed 5,650 MMBtu/day of fuel gas. [District NSR Rule] Federally Enforceable Through 
   Title V Permit

4. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [District Rule 
   4703, 6.4.5] Federally Enforceable Through Title V Permit

5. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates (three-hour rolling 
   average) shall not exceed any of the following: 0.0111 lb-NOx/MMBtu or 3 ppmv-NOx @ 15% O2, and 0.076 lb-
   CO/MMBtu or 200 ppmvd-CO @15% O2. [District Rule 4703, 5.1.2, 5.2 and District NSR Rule] Federally 
   Enforceable Through Title V Permit

6. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates shall not exceed any of 
   the following: 0.016 lb-PM10/MMBtu, 0.010 lb-SOx/MMBtu, 0.008 lb-VOC/MMBtu. [District NSR Rule] Federally 
   Enforceable Through Title V Permit

7. Maximum daily emission limitations (DEL) shall not exceed any of the following: 190.2 lb-NOx/day, 56.5 lb-
   SOx/day, 90.4 lb-PM10/day, 429.4 lb-CO/day, and 45.2 lb-VOC/day. [District NSR Rule] Federally Enforceable 
   Through Title V Permit

8. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of 
   two hours and two hours, respectively, per occurrence. [District Rule 4703, 3.25] Federally Enforceable Through Title 
   V Permit

9. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in 
   order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable 
   Through Title V Permit

10. On days of gas turbine engine startup/shutdown and/or reduced load, permittee shall demonstrate compliance with 
    NOx daily emission limitation by records of calculations using CEMS data, fuel rate data, and daily hours of operation 
    data. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Permittee shall report the following emission exceedences to the District: NOx emission rate on a three-hour average, and DEL of NOx during days of gas turbine engine startup/shutdown. [District Rule 1080] Federally Enforceable Through Title V Permit

12. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081] Federally Enforceable Through Title V Permit

13. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

14. Permittee shall maintain accurate daily records of fuel gas consumption and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1081] Federally Enforceable Through Title V Permit

15. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

16. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

17. Continuous emission monitoring systems shall be calibrated and operated according to EPA guidelines as specified in CFR, Part 60, Appendix B. [District Rule 4001 and 40 CFR 60.334(b)] Federally Enforceable Through Title V Permit

18. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

19. The owner or operator shall install, certify, maintain, operate and quality-assure a system which continuously measures and records the exhaust gas oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, 40 CFR 60.334(a), District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

20. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit

21. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

22. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

23. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b), District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

24. Permittee shall submit a CEMS written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEMS was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR 60.334(j), District Rule 1080, 8.0 and District Rule 2520, 9.3.2 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
25. Excess emissions shall be defined as any consecutive 2-hour period during which the average emissions of NOx and CO, as measured by continuous monitoring system exceeds the concentration emissions limits set forth for these pollutants. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

26. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEMS. The operator shall inform the District of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

27. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

28. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 3.5 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 3.5 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(h) & District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

29. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. [40 CFR 60.335(b), District Rule 4703, 6.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

30. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335 and District Rules 1081, 4703, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

31. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

32. Performance testing shall be witnessed or authorized District by personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2 & 7.3] Federally Enforceable Through Title V Permit

33. Daily records of NOx and CO emission calculations during days of startup/shutdown or reduced load shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

34. Source testing to measure ammonia shall be conducted using test method BAAQMD ST-1B. [District Rule 4102]

35. The permittee shall maintain records of the daily calculated ammonia slip measurements. [District Rule 4102]

36. Sulfur compound emissions shall not exceed 0.015% by volume, 150 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); District Rule 4801 and Kern County Rule 407] Federally Enforceable Through Title V Permit

37. Permittee shall maintain records of the following: 1) the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the permit unit; 2) performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS; and 3) emission measurements. [District Rules 1080, 7.3, 2520, 9.3.2 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

38. The owner or operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, and quantity and heat input of fuel used. [District Rules 2520, 9.3.2, 4703, 6.2.6] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

Facility Name: AERA ENERGY LLC
Location: HEAVY OIL WESTERN STATIONARY SOURCE, KERN COUNTY, CA
39. The permittee shall demonstrate and maintain compliance with Sections 5.0 and 6.0 of District Rule 4703 within 90 days following the next Major Overhaul but no later than April 30, 2008. [District Rule 4703, 7.2] Federally Enforceable Through Title V Permit

40. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

41. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 3, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

42. CO emissions shall not exceed (lbs/hr) (three-hour average) = \(38 - (0.2) \times \text{ambient air temperature in } ^\circ\text{Fahrenheit}\) (not to exceed 30 lbs/hr) and (ppmv) = \(1.86 \times (\text{lbs/hr}) @ 15\% \text{ O}_2\) (not to exceed 55.8 ppmv). [PSD SJ 85-03] Federally Enforceable Through Title V Permit

43. Permittee shall operate and maintain a continuous monitoring system to measure the ambient air temperature. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

44. Permittee shall operate and maintain a water injection system and instrumentation to continuously monitor and record levels of consumption of fuel and water. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

45. EPA Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable PSD emissions limits. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

46. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

47. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

48. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Operator shall not discharge into the atmosphere combustion contaminants (PM) exceeding in concentration at the point of discharge, 0.1 gr/dscf. [District Rule 4201; and 404 (Kern)] Federally Enforceable Through Title V Permit

2. The operator shall establish the minimum ammonia injection rate required to meet the applicable Rule 4703 NOx emission rate at the time of startup emission testing. The minimum injection rate shall be reported to the District and the injection rate shall be monitored by the operator during CEM breakdowns to demonstrate NOx emission compliance. [District Rule 4703, 6.2.5] Federally Enforceable Through Title V Permit

3. Fuel consumption shall not exceed 5,650 MMBtu/day of fuel gas. [District NSR Rule] Federally Enforceable Through Title V Permit

4. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, OR ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

6. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates (three-hour rolling average) shall not exceed any of the following: 0.0111 lb-NOx/MMBtu or 3 ppmv-NOx @ 15% O2, and 0.076 lb-CO/MMBtu or 200 ppmv-CO @15% O2. [District Rule 4703, 5.1.2, 5.2 and District NSR Rule] Federally Enforceable Through Title V Permit

7. Except during periods of gas turbine engine startup/shutdown and reduced load, emission rates shall not exceed any of the following: 0.016 lb-PM10/MMBtu, 0.010 lb-SOx/MMBtu, or 0.008 lb-VOC/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Maximum daily emission limitations (DEL) shall not exceed any of the following: 190.2 lb-NOx/day, 56.5 lb-SOx/day, 90.4 lb-PM10/day, 429.4 lb-CO/day, and 45.2 lb-VOC/day. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours and two hours, respectively, per occurrence. [District Rule 4703, 3.25] Federally Enforceable Through Title V Permit

10. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the exhaust gas diverter gate not exceeding one hour. [District Rule 4703, 3.19] Federally Enforceable Through Title V Permit

11. On days of gas turbine engine startup/shutdown and/or reduced load, permittee shall demonstrate compliance with NOx daily emission limitation by records of calculations using CEM data, fuel rate data, and daily hours of operation data. [District Rule 1080] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
12. Permittee shall report the following emission exceedences to the District: NOx emission rate on a three-hour average, and DEL of NOx during days of gas turbine engine startup/shutdown. [District Rule 1080] Federally Enforceable Through Title V Permit

13. Compliance testing shall be conducted annually as required by the District-approved plan. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

15. Permittee shall maintain accurate daily records of fuel gas consumption and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1081] Federally Enforceable Through Title V Permit

16. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

17. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

18. Continuous emission monitoring systems shall be calibrated and operated according to EPA guidelines as specified in CFR, Part 60, Appendix B. [District Rule 4001 and 40 CFR 60.334(b)] Federally Enforceable Through Title V Permit

19. Nitrogen oxides (NOx) concentrations shall be determined using EPA Method 7E or 20, and oxygen (O2) concentrations shall be determined using EPA Method 3, 3A, or 20. [40 CFR 60.335(b) and District Rule 4703, 6.4] Federally Enforceable Through Title V Permit

20. The permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

21. The owner or operator shall install, certify, maintain, operate and quality-assure a system which continuously measures and records the exhaust gas oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0, 40 CFR 60.334(b), District Rule 4703, 6.2.1, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

22. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rule 40 CFR 60.334(b)(2) and District Rule 1080, 6.4] Federally Enforceable Through Title V Permit

23. The continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

24. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

25. Records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

26. The owner or operator shall maintain CEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b), District Rule 1080, 7.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit
27. Permittee shall submit a CEMs written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR 60.334(j), (j)(5), District Rule 1080, 8.0 and District Rule 2520, 9.6.1 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

28. The CEMS shall be linked to a data logger which is compatible with the District's Data acquisition system. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

29. Excess emissions shall be defined as any consecutive 2-hour period during which the average emissions of NOx and CO, as measured by continuous monitoring system exceeds the concentration emissions limits set forth for these pollutants. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

30. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. The operator shall inform the District of the intent to shut down the CEM at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

31. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 3.5 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 3.5 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

32. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. [40 CFR 60.335(b), District Rule 4703, 6.3 & PSD SJ 85-03] Federally Enforceable Through Title V Permit

33. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081, 4703, & PSD SJ 85-03] Federally Enforceable Through Title V Permit

34. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

35. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

36. Daily records of NOx and CO emission calculations during days of startup/shutdown or reduced load shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

37. CO emissions shall not exceed (lbs/hr) (three-hour average) = 38-(0.2)*(ambient air temperature in °Fahrenheit) (not to exceed 30 lbs/hr) and (ppmv) = 1.86*(lbs/hr) @ 15% O2 (not to exceed 55.8 ppmv). [PSD SJ 85-03] Federally Enforceable Through Title V Permit

38. Permittee shall operate and maintain a continuous monitoring system to measure the ambient air temperature. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

39. Permittee shall operate and maintain a water injection system and instrumentation to continuously monitor and record levels of consumption of fuel and water. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
40. EPA Regional Administrator shall be notified by telephone within 48 hours following any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner which results in an increase in emissions above any allowable PSD emissions limits. [PSD SJ 85-03] Federally Enforceable Through Title V Permit

41. All equipment, facilities, or systems installed or used to achieve compliance with the terms and conditions of this permit shall at all times be maintained in good working order and be operated as efficiently as possible so as to minimize air pollutant emissions. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

42. All correspondence as required by this permit shall be forwarded to: a) Director, Air Management Division, Compliance Section (Attn: A-3-3), EPA Region IX, 75 Hawthorne Street, San Francisco, CA, 94105; b) Chief, Stationary Source Control Division, California Air Resource Board, P.O. Box 2815, Sacramento, CA, 95814; and c) Director, SJVUAPCD, 1990 East Gettysburg, Fresno, CA, 93726. [PSD SJ 89-02] Federally Enforceable Through Title V Permit

43. Source testing to measure ammonia shall be conducted using test method BAAQMD ST-1B. [District Rule 4102] Federally Enforceable Through Title V Permit

44. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

45. The permittee shall maintain records of the daily calculated ammonia slip measurements. [District Rule 4102]

46. Permittee shall maintain records of the following: 1) the occurrence and duration of any start-up, shutdown, or malfunction in the operation of the permit unit; 2) performance testing, evaluations, calibrations, checks, adjustments, and maintenance of CEMS; and 3) emission measurements. [District Rules 1080, 7.3, 2520, 9.4.2 and 40 CFR 60.7(b)] Federally Enforceable Through Title V Permit

47. The owner or operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, and quantity and heat input of fuel used. [District Rules 2520, 9.4.2, 4703, 6.2.6] Federally Enforceable Through Title V Permit

48. Sulfur compound emissions shall not exceed 0.2% by volume, 2,000 ppmv, on a dry basis averaged over 15 consecutive minutes. [40 CFR 60.333(a); County Rules 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus)] Federally Enforceable Through Title V Permit

49. The permittee shall demonstrate and maintain compliance with Sections 5.0 and 6.0 of District Rule 4703 within 90 days following the next Major Overhaul but no later than April 30, 2008. [District Rule 4703, 7.2] Federally Enforceable Through Title V Permit

50. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

51. The owner or operator shall monitor the gas turbine exhaust gas NOx emissions using a system that meets EPA requirements as specified in 40 CFR Part 60 App. B, Spec. 3, 40 CFR Part 60 App. F, and 40 CFR Part 60.7 (c), 60.7 (d), and 60.13. [District Rule 4703, 6.2.3] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-879-9

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW11 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SOLAR CENTAUR MODEL T4500, 3.2 MW, 61.5 MMBTU/HR HEAT INPUT, GAS-FIRED GAS TURBINE ENGINE/GENERATOR WITH INLET AIR EVAPORATIVE COOLER AND H2O INJECTION, 38.7 MMBTU/HR DUCT BURNER, AND S.C.R. WITH AMMONIA INJECTION. - BELRIDGE: DESIGNATE DORMANT EMISSIONS UNIT FOR RULE 4703 AND REDUCE MONITORING REPORTS FREQUENCY TO QUARTERLY ONLY WHEN IN OPERATION

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in the following conditions. [District Rule 2201] Federally Enforceable Through Title V Permit

4. After 1/1/2011, this equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 Tier 3. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO
5. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rules 1070 and 2080] Federally Enforceable Through Title V Permit

6. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080] Federally Enforceable Through Title V Permit

7. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District Rules 2201 and 4703, 6.3] Federally Enforceable Through Title V Permit

8. A source test to demonstrate compliance with NOx and CO emission limits and a fuel sulfur content certification shall be performed within 60 days of recommencing operation of this unit. [District Rules 2201 and 4703, 6.3] Federally Enforceable Through Title V Permit

9. Permittee shall maintain accurate records of the time and duration of non-operation of this unit. [District Rules 2201 and 4703, 6.2] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, gas turbine engine shall be equipped with continuously recording fuel-to-water injection ratio monitor accurate to within +/- 5%. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Gas turbine engine shall exhaust only to heat recovery steam generator and duct burner shall receive combustion air only from gas turbine exhaust. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Upon recommencing operation, duct burner fuel gas supply shall be equipped with injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Upon recommencing operation, ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District Rule 2201] Federally Enforceable Through Title V Permit

15. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer. [District Rule 2201] Federally Enforceable Through Title V Permit

16. Upon recommencing operation, gas temperature at SCR catalyst section inlet shall be monitored by operational temperature indicator. [District Rule 2201] Federally Enforceable Through Title V Permit

17. Emission rates at duct burner exhaust shall not exceed any of the following: 23.0 lb/day PM10, 4.7 lb/day SOx (as SO2), 64.8 lb/day NOx (as NO2), 26.4 lb/day VOC, or 168.7 lb/day CO. [District Rule 2201] Federally Enforceable Through Title V Permit

18. No more than 1.4 MM scf/day of natural gas shall be consumed by gas turbine and no more than 0.9 MM scf/day of natural gas shall be consumed by duct burners. [District Rule 2201] Federally Enforceable Through Title V Permit

19. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and 2 hours for shutdown, per occurrence. [District Rule 4001, District Rule 2201] Federally Enforceable Through Title V Permit

20. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

21. Upon recommencing operation, to demonstrate compliance with NO2 and CO emissions during days of startup/shutdown, daily emissions shall be calculated by a continuous emissions monitoring (CEM) system. [District Rule 2201] Federally Enforceable Through Title V Permit

22. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
23. Until January 1, 2011, except during periods of gas turbine engine startup/shutdown, emission rates (based on three-hour rolling average) shall not exceed any of the following: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 190.2 lb/day) or CO: 200 ppmvd @ 15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

24. On and after January 1, 2011, emissions from this unit shall not exceed any of the following (based on three-hour rolling average): NOx (as NO2): 5 ppmv dry @ 15% O2 (equates to 27.2 lb/day) and CO: 200 ppmv dry @ 15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1 and 5.2] Federally Enforceable Through Title V Permit

25. Except during periods of startup/shutdown, gas turbine engine emission rates shall not exceed any of the following: NOx as NO2: 2.70 lb/hr, or CO: 7.03 lb/hr, PM10: 0.96 lb/hr, SOx as SO2: 0.20 lb/hr, or VOC: 1.10 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

26. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 150 ppmvd @ 15% O2 and SOx emissions shall not exceed 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

27. Compliance with hourly NOx (2.70 lb/hr) and CO (7.03 lb/hr) emission limits shall be demonstrated annually by District-witnessed sample collection done by independent testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

29. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

30. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

31. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

32. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District Rule 2201] Federally Enforceable Through Title V Permit

35. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring. [District Rule 4001] Federally Enforceable Through Title V Permit

36. Upon recommencing operation, permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

37. Upon recommencing operation, permittee shall maintain accurate records of ammonia consumption. [District Rules 1070 and 2520, 9.4] Federally Enforceable Through Title V Permit

38. Permittee shall report the following emission exceedances to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit

39. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not recognized as a basis for a Rule 1100 enforcement exemption. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
40. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rules 1070 and 4703, 6.2.4] Federally Enforceable Through Title V Permit

41. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

42. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

43. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the auxiliary burner in operation and not in operation. An annual demonstration of compliance with the auxiliary burner in operation is not required in any year in which the auxiliary burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the auxiliary burner. An annual demonstration of compliance with the auxiliary burner not in operation is not required in any year in which the auxiliary burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the auxiliary burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

44. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

45. Upon recommencing operation, the permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

46. Upon recommencing operation, the continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit

47. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

48. Upon recommencing operation, records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3] Federally Enforceable Through Title V Permit

49. When designated as a dormant emissions unit, the permittee shall not be required to perform monitoring requirements or submit CEMs reports for any calendar quarter in which the unit is not operational. Permittee shall submit a CEMs written report to the District for each calendar quarter in which the unit operated, due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rules 1080, 8.0, 2201, 2520, 9.6.1] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
50. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

51. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. For planned CEM maintenance that will require the CEM system to be shut down more than 4 hours in a day or more than 12 hours in a calendar month, the operator shall notify the District at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

52. Upon recommencing operation, permittee shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

53. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 0.75 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 0.75 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

54. The following methods shall be used for testing required by this permit: NOx (ppmv) - EPA Method 7E, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B, Stack gas oxygen - EPA Method 3 or 3A, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H2S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 and 4703, 6.4] Federally Enforceable Through Title V Permit

55. Note: Formerly S-1511-361
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-880-9

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
                BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
           KERN COUNTY, CA

SECTION: NW11  TOWNSHIP: 29S  RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SOLAR CENTAUR MODEL T4500, 3.2 MW, 61.5 MM BTU/HR HEAT INPUT, GAS-FIRED GAS
TURBINE (COGEN UNIT #B) ENGINE/GENERATOR WITH INLET AIR EVAPORATIVE COOLER AND H2O INJECTION,
38.7 MM BTU/HR DUCT BURNER, AND S.C.R. WITH AMMONIA INJECTION. - BELRIDGE: DESIGNATE DORMANT
EMISSIONS UNIT FOR RULE 4703 AND REDUCE MONITORING REPORTS FREQUENCY TO QUARTERLY ONLY
WHEN IN OPERATION

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR
   70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable
   Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application
to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4.
   [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for
   changes specified in the following conditions. [District Rule 2201]

4. After 1/1/2011, this equipment shall not be operated for any reason until an Authority to Construct permit is issued
   approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 Tier 3.
   [District Rule 2201]

5. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a
dormant emissions unit or an active emissions unit. [District Rule 1070]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO
OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE.
Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the
approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all
Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this
Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with
all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
6. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080] Federally Enforceable Through Title V Permit

7. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

8. A source test to demonstrate compliance with NOx and CO emission limits and a fuel sulfur content certification shall be performed within 60 days of recommencing operation of this unit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

9. Permittee shall maintain accurate records of the time and duration of non-operation of this unit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, gas turbine engine shall be equipped with continuously recording fuel-to-water injection ratio monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Gas turbine engine shall exhaust only to heat recovery steam generator and duct burner shall receive combustion air only from gas turbine exhaust. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Upon recommencing operation, duct burner fuel gas supply shall be equipped with injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Upon recommencing operation, ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Upon recommencing operation, gas temperature at SCR catalyst section inlet shall be monitored by operational temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Emission rates at duct burner exhaust shall not exceed any of the following: 23.0 lb/day PM10, 4.7 lb/day SOx (as SO2), 64.8 lb/day NOx (as NO2), 26.4 lb/day VOC, or 168.7 lb/day CO. [District NSR Rule] Federally Enforceable Through Title V Permit

18. No more than 1.4 MM scf/day of natural gas shall be consumed by gas turbine and no more than 0.9 MM scf/day of natural gas shall be consumed by duct burners. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and 2 hours for shutdown, per occurrence. [District Rule 4001, District NSR Rule] Federally Enforceable Through Title V Permit

20. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Upon recommencing operation, to demonstrate compliance with NO2 and CO emissions during days of startup/shutdown, daily emissions shall be calculated by a continuous emissions monitoring (CEM) system. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

23. Until January 1, 2011, except during periods of gas turbine engine startup/shutdown, emission rates (based on three-hour rolling average) shall not exceed any of the following: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 190.2 lb/day) or CO: 200 ppmvd @15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
24. On and after January 1, 2011, emissions from this unit shall not exceed any of the following (based on three-hour rolling average): NOx (as NO2): 5 ppmv dry @ 15% O2 (equates to 27.2 lb/day) and CO: 200 ppmv dry @ 15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

25. Except during periods of startup/shutdown, gas turbine engine emission rates shall not exceed any of the following: NOx as NO2: 2.70 lb/hr, CO: 7.03 lb/hr, PM10: 0.96 lb/hr, SOx as SO2: 0.20 lb/hr, or VOC: 1.10 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 150 ppmvd @ 15% O2 and SOx emissions shall not exceed 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

27. Compliance with hourly NOx (2.70 lb/hr) and CO (7.03 lb/hr) emission limits shall be demonstrated annually by District-witnessed sample collection done by independent testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

29. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

31. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule] Federally Enforceable Through Title V Permit

35. Records required by this permit shall be retained on site for a period of at least two years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

36. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring. [District Rule 4001] Federally Enforceable Through Title V Permit

37. Upon recommencing operation, permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rule 1070] Federally Enforceable Through Title V Permit

38. Permittee shall maintain accurate records of ammonia consumption. [District Rule 1070] Federally Enforceable Through Title V Permit

39. Permittee shall report the following emission exceedances to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not recognized as a basis for a Rule 1100 enforcement exemption. [District NSR Rule] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
41. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

42. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

43. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the auxiliary burner in operation and not in operation. An annual demonstration of compliance with the auxiliary burner in operation is not required in any year in which the auxiliary burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the auxiliary burner. An annual demonstration of compliance with the auxiliary burner not in operation is not required in any year in which the auxiliary burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the auxiliary burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

44. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

45. Upon recommencing operation, the permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

46. Upon recommencing operation, the continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit

47. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

48. Upon recommencing operation, records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3] Federally Enforceable Through Title V Permit

49. When designated as a dormant emissions unit, the permittee shall not be required to perform monitoring requirements or submit CEMs reports for any calendar quarter in which the unit is not operational. Permittee shall submit a CEMs written report to the District for each calendar quarter in which the unit operated due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and District Rule 2520, 9.6.1] Federally Enforceable Through Title V Permit

50. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
51. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. For planned CEM maintenance that will require the CEM system to be shut down more than 4 hours in a day or more than 12 hours in a calendar month, the operator shall notify the District at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

52. Upon recommencing operation, permittee shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

53. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 0.75 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 0.75 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

54. The following methods shall be used for testing required by this permit: NOx (ppmv) - EPA Method 7E, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B, Stack gas oxygen - EPA Method 3 or 3A, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H2S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 and 4703] Federally Enforceable Through Title V Permit

55. Note: Formerly S-1511-362
AUTHORIZED TO CONSTRUCT

PERMIT NO: S-1547-881-9

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93389-1164

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: NW11 TOWNSHIP: 29S RANGE: 21E

EQUIPMENT DESCRIPTION:
MODIFICATION OF SOLAR CENTAUR MODEL T4500, 3.2 MW, 61.5 MMBTU/HR HEAT INPUT, GAS-FIRED GAS TURBINE (COGEN UNIT #C) ENGINE/GENERATOR WITH INLET AIR EVAPORATIVE COOLER, H2O INJECTION, 38.7 MMBTU/HR DUCT BURNER, AND S.C.R. WITH AMMONIA INJECTION. - BELRIDGE: DESIGNATE DORMANT EMISSIONS UNIT FOR RULE 4703 AND REDUCE MONITORING REPORTS FREQUENCY TO QUARTERLY ONLY WHEN IN OPERATION

CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Federally Enforceable Through Title V Permit

2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit

3. No modification to this unit shall be performed without an Authority to Construct for such modification(s), except for changes specified in the following conditions. [District Rule 2201]

4. After 1/1/2011, this equipment shall not be operated for any reason until an Authority to Construct permit is issued approving all necessary retrofits required to comply with the applicable requirements of District Rule 4703 Tier 3. [District Rule 2201]

5. The permittee shall notify the District at least seven calendar days prior to the designation of this permit unit as a dormant emissions unit or an active emissions unit. [District Rule 1070]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
6. When designated as a dormant emissions unit the fuel supply line shall be physically disconnected from the emissions unit. [District Rule 2080] Federally Enforceable Through Title V Permit

7. When designated as a dormant emissions unit, the permittee shall not be required to perform source testing, fuel sulfur content certification, and monitoring requirements. [District NSR Rule and 4703] Federally Enforceable Through Title V Permit

8. A source test to demonstrate compliance with NOx and CO emission limits and a fuel sulfur content certification shall be performed within 60 days of recommencing operation of this unit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

9. Permittee shall maintain accurate records of the time and duration of non operation of this unit. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit

10. Upon recommencing operation, gas turbine engine shall be equipped with continuously recording fuel-to-water injection ratio monitor accurate to within +/- 5%. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Gas turbine engine shall exhaust only to heat recovery steam generator and duct burner shall receive combustion air only from gas turbine exhaust. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Upon recommencing operation, duct burner fuel gas supply shall be equipped with injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

13. Upon recommencing operation, ammonia injection grid shall be equipped with operational ammonia flow meter and injection pressure indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District NSR Rule] Federally Enforceable Through Title V Permit

15. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer. [District NSR Rule] Federally Enforceable Through Title V Permit

16. Upon recommencing operation, gas temperature at SCR catalyst section inlet shall be monitored by operational temperature indicator. [District NSR Rule] Federally Enforceable Through Title V Permit

17. Emission rates at duct burner exhaust shall not exceed any of the following: 23.0 lb/day PM10, 4.7 lb/day SOx (as SO2), 64.8 lb/day NOx (as NO2), 26.4 lb/day VOC, or 168.7 lb/day CO. [District NSR Rule] Federally Enforceable Through Title V Permit

18. No more than 1.4 MM scf/day of natural gas shall be consumed by gas turbine and no more than 0.9 MM scf/day of natural gas shall be consumed by duct burners. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Startup and shutdown of gas turbine engine, as defined in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and 2 hours for shutdown, per occurrence. [District Rule 4001, District NSR Rule] Federally Enforceable Through Title V Permit

20. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rule 1070] Federally Enforceable Through Title V Permit

21. Upon recommencing operation, to demonstrate compliance with NO2 and CO emissions during days of startup/shutdown, daily emissions shall be calculated by a continuous emissions monitoring (CEM) system. [District NSR Rule] Federally Enforceable Through Title V Permit

22. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

23. Until January 1, 2011, except during periods of gas turbine engine startup/shutdown, emission rates (based on three-hour rolling average) shall not exceed any of the following: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 190.2 lb/day) or CO: 200 ppmvd @15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
24. On and after January 1, 2011, emissions from this unit shall not exceed any of the following (based on three-hour rolling average): NOx (as NO2): 5 ppmv dry @ 15% O2 (equates to 27.2 lb/day) and CO: 200 ppmv dry @ 15% O2 (equates to 661.8 lb/day). [District Rule 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

25. Except during periods of startup/shutdown, gas turbine engine emission rates shall not exceed any of the following: NOx as NO2: 2.70 lb/hr, CO: 7.03 lb/hr, PM10: 0.96 lb/hr, SOx as SO2: 0.20 lb/hr, or VOC: 1.10 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

26. Maximum NOx emission rate (one hour average) shall not exceed the NSPS standard of 150 ppmvd @ 15% O2 and SOX emissions shall not exceed 150 ppmvd @ 15% O2. [District Rule 4001] Federally Enforceable Through Title V Permit

27. Compliance with hourly NOx (2.70 lb/hr) and CO (7.03 lb/hr) emission limits shall be demonstrated annually by District-witnessed sample collection done by independent testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit

28. Compliance with sulfur oxide emission limits shall be demonstrated by fuel gas sulfur analysis by independent testing laboratory annually. [District Rule 1081] Federally Enforceable Through Title V Permit

29. Compliance source testing shall be conducted under conditions representative of normal operation. [District Rule 1081] Federally Enforceable Through Title V Permit

30. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit

31. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

33. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit

34. The permittee shall maintain records of fuel type, quantity, permitted emission factors and emissions for each unit for each day of operation, in the format approved by the District. [District NSR Rule] Federally Enforceable Through Title V Permit

35. Records required by this permit shall be retained on site for a period of at least five years and shall be made readily available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

36. Permittee shall comply in full with Rule 4001 (New Source Performance Standards) requirements, including notification, recordkeeping and monitoring. [District Rule 4001] Federally Enforceable Through Title V Permit

37. Upon recommencing operation, permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rule 1070] Federally Enforceable Through Title V Permit

38. Permittee shall maintain accurate records of ammonia consumption. [District Rule 1070] Federally Enforceable Through Title V Permit

39. Permittee shall report the following emission exceedances to the District: emission rates of NOx & CO on a three-hour rolling average, NSPS emission rate on one hour average, and DEL of NOx & CO during days of gas turbine engine startup/shutdown. [District NSR Rule] Federally Enforceable Through Title V Permit

40. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not recognized as a basis for a Rule 1100 enforcement exemption. [District NSR Rule] Federally Enforceable Through Title V Permit
41. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

42. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520 and 4703, 6.2.6] Federally Enforceable Through Title V Permit

43. Unit shall demonstrate compliance annually with NOx and CO emissions limits with the auxiliary burner in operation and not in operation. An annual demonstration of compliance with the auxiliary burner in operation is not required in any year in which the auxiliary burner is not operated at all in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of resumption of operation of the auxiliary burner. An annual demonstration of compliance with the auxiliary burner not in operation is not required in any year in which the auxiliary burner operated continuously in conjunction with the turbine in the preceding 12 months, in such case, the unit shall be compliance source tested within 60 days of shutdown of operation of the auxiliary burner. [40 CFR 60.335(b) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit

44. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

45. Upon recommencing operation, the permittee shall operate and maintain a continuous monitoring and recording system to measure oxides of nitrogen, carbon monoxide, and oxygen or carbon dioxide. [District Rule 1080, 4.0 and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

46. Upon recommencing operation, the continuous emissions monitoring system shall meet the performance specification requirements in 40 CFR 60, Appendix B; and 40 CFR 51, Appendix P, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [District Rule 1080, 6.5] Federally Enforceable Through Title V Permit

47. Results of continuous emissions monitoring must be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080, 7.2] Federally Enforceable Through Title V Permit

48. Upon recommencing operation, records of continuous emissions monitoring system shall be maintained and shall contain: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance of CEMs, and emission measurements. [District Rule 1080, 7.3] Federally Enforceable Through Title V Permit

49. When designated as a dormant emissions unit, the permittee shall not be required to perform monitoring requirements or submit CEMs reports for any calendar quarter in which the unit is not operational. Permittee shall submit a CEMs written report to the District for each calendar quarter in which the unit operated due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080, 8.0 and District Rule 2520, 9.6.1] Federally Enforceable Through Title V Permit

50. Any emissions in excess of the limits imposed by conditions in this permit, as measured by the continuous monitoring equipment constitutes a violation of District Rules and Regulations and shall be reported by the operator to the APCO within 96 hours. [District Rule 1080, 9.0] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE
51. Operator shall notify the District no later than eight hours after the detection of a breakdown of the CEM. For planned CEM maintenance that will require the CEM system to be shut down more than 4 hours in a day or more than 12 hours in a calendar month, the operator shall notify the District at least 24 hours prior to the event. [District Rule 1080, 10.0] Federally Enforceable Through Title V Permit

52. Upon recommencing operation, permittee shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

53. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 0.75 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 0.75 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

54. The following methods shall be used for testing required by this permit: NOx (ppmv) - EPA Method 7E, NOx (lb/MMBtu) - EPA Method 19, CO (ppmv) - EPA Method 10 or 10B, Stack gas oxygen - EPA Method 3 or 3A, SOx (lb/MMBtu) - ARB Method 100 or EPA Method 6 or fuel gas sulfur content analysis and EPA Method 19, Fuel gas sulfur content - ASTM D3246 or double GC for H2S and Mercaptans, Fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 and 4703] Federally Enforceable Through Title V Permit

55. Note: Formerly S-1511-362
AUTHORITY TO CONSTRUCT

PERMIT NO: S-1547-1060-9

LEGAL OWNER OR OPERATOR: AERA ENERGY LLC
MAILING ADDRESS: PO BOX 11164
BAKERSFIELD, CA 93399-1164

ISSUANCE DATE: 11/22/2010

LOCATION: HEAVY OIL WESTERN STATIONARY SOURCE
KERN COUNTY, CA

SECTION: 13 TOWNSHIP: 26S RANGE: 20E

EQUIPMENT DESCRIPTION:
MODIFICATION OF 3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION LOST HILLS UNIT
#4: INSTALL SELECTIVE CATALYTIC REDUCTION (SCR) FOR RULE 4703 COMPLIANCE

CONDITIONS

1. Authority to Construct (ATC) S-1547-1060-7 shall be cancelled and replaced by this ATC. [District Rule 2201]

2. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit

3. Cogeneration unit shall include Allison Model 501-KB-5 48.7 MMBTU/hr gas-fired engine, synchronous electrical generator, unfired 22.5 MMBTU/hr steam generator, and inlet air evaporative cooler. [District Rule 2201] Federally Enforceable Through Title V Permit

4. Turbine lube oil tank and generator gearbox lube oil tank shall vent only through fiber bed filter system or other District-approved control Device. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

6. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

7. Gas turbine engine shall be equipped with water injection system for NOx control. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

DAVID WARNER, Director of Permit Services
S-1547-1060-9 • Jul 18 2011 23:58PM • GOUGH • Joint Inspection NOT Required
Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585
24. Startup and shutdown of the gas turbine, as defined in this permit and in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and two hours for shutdown, per occurrence. Emission concentrations subsequent to this startup period shall not exceed the limits specified in this permit except during shutdown. [40 CFR Subpart A 60.2 and District Rule 4703] Federally Enforceable Through Title V Permit

25. The duration of reduced load shall not exceed a time period of one hour per occurrence. [District Rule 4703, 6.2.4]

26. Emissions shall not exceed any of the following limits: NOx (as NO2); 150.7 lb/day, CO: 107.5 lb/day, PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day or VOC: 39.6 lb/day. [District Rule 4703, 6.2.4]

27. Daily records of NOx and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

28. Maximum NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [40 CFR 60.332(a)(2) & 60.333(a)]

29. A source test to demonstrate compliance with NOx, CO, and NH3 emission limits, and fuel sulfur content shall be performed within 90 days of startup of this modified unit. The appropriate ammonia injection rate, fuel consumption, ammonia to fuel ratio, water to fuel ratio, and any other associated operating parameter shall be continuously monitored and recorded during this test to establish acceptable operating ranges. Selective Catalytic Reduction (SCR) 95% control efficiency may be demonstrated as an alternative to compliance with the Rule 4703 NOx emissions concentration limit. [District Rules 2201, 40 CFR 60.335(b), and 4703]

30. Source testing to measure exhaust gas NOx, CO, and NH3 concentrations and, if applicable, Selective Catalytic Reduction (SCR) control efficiency shall be conducted at least once every twelve (12) months (no more than 30 days before or after the required annual source test date). Performance testing shall be conducted under conditions representative of normal operation. [40 CFR 60.335(b), District Rule 4703, 6.3 & District Rule 2520, 9.4.2]

31. The following test methods shall be used: NOx (ppmv) - EPA Method 7E or 20, CO (ppmv) - EPA Method 10 or 10B, stack gas oxygen - EPA Method 3 or 3A or 20, fuel gas sulfur content - ASTM D1072, D4468, or D3246 or double GC for H2S and mercaptans, fuel gas HHV and LHV - ASTM D3598-91, D1826-88 or D1945-81, Ammonia slip - BAAQMD method ST-1B. [40 CFR 60.335(b) and District Rules 1081 & 4703]

32. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (Last Amended December 16, 1993). [District Rule 1081, and County Rules 108 (Kings), 108.1 (Fresno, Merced, San Joaquin, Tulare, Kern, and Stanislaus), and 110 (Madera)] Federally Enforceable Through Title V Permit

33. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

34. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

35. The permittee shall monitor and record the stack concentration of NOx, CO, NH3, and O2 at least once every month in which a source test is not performed. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH3 monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the previous calendar month. [District Rule 4703]

36. If the NOx or CO concentrations corrected to 15% O2 as measured by the portable analyzer or the NH3 concentration, as measured by Draeger tubes or a District approved equivalent method, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4703]
8. Gas turbine engine water injection rate shall be maintained at a water-to-fuel ratio documented to result in compliance with emission limits. [District Rule 2201]

9. Gas turbine engine shall be equipped with continuously recording water to fuel injection rate monitoring system accurate to within +/- 5%. [District Rule 2201 & 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

10. If ammonia injection system is inoperative for more than 1 hour, gas turbine shall be shut down. [District Rule 2201]

11. Evaporative cooler shall use only fresh and filtered water. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Compliance testing of lube oil vent and gearbox vent shall be required if visible emissions from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District Rule 1081] Federally Enforceable Through Title V Permit

15. The ammonia (NH3) emissions from the exhaust of the SCR system serving this gas turbine shall not exceed 20 ppmvd. [District Rule 2201]

16. Permittee shall maintain accurate records of ammonia consumption. [District Rule 1070 and 4703]

17. Gas temperature at SCR catalyst section inlet shall be continuously monitored by operational temperature indicator. Inlet gas temperature to catalyst bed shall be maintained within range recommended by catalyst manufacturer and determined by performance tests. [40 CFR 60.334(a) and District Rule 4703, 6.2.1]

18. Permittee shall install, operate and maintain in calibration a system which continuously measures and records ammonia injection flow rate and pressure. Ammonia injection flow rate and pressure shall be operated within the range recommended by SCR manufacturer and determined by performance tests such that the turbine maintains 95% or greater control efficiency or complies with the applicable NOx emission concentration limit. [40 CFR 60.334(a) and District Rule 4703, 6.2.1]

19. Except during startup, shutdown, and reduced load periods, any one-hour period during which the average ammonia injection flowrate, as measured by the continuous monitoring system, falls outside the flowrate range as determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average ammonia injection flowrate, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)]

20. Fuel gas sulfur content shall not exceed 19.5 ppmv as hydrogen sulfide (H2S) or 1.1 gr/100 scf as total fuel sulfur. [District Rule 2201] Federally Enforceable Through Title V Permit

21. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 1.1 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 1.1 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. During an initial shakedown period, except during periods of startup and shutdown, the emissions shall not exceed any of the following limits: 35 ppmvd NOx @ 15% O2 referenced as NO2. The shakedown period shall not exceed 90 calendar days from the initial startup of the unit under this permit. The shakedown period must be concluded prior to the applicable Rule 4703 compliance deadline selected for this unit. The permittee shall maintain a record of the date of initial operation of this unit, fuel combusted (scf/day) on daily basis, water-to-fuel ratio, and results of ammonia injection rate monitoring from CMS. These records shall be made readily available for District inspection upon request. [District Rule 2201]

23. Except during periods of startup, shutdown, and shakedown, emissions rates (three hour rolling average) shall not exceed any of the following: NOx (as NO2): 5 ppmv dry @ 15% O2, CO: 41 ppmv dry @ 15% O2. [District Rule 4703, 5.1.2, 5.2]
37. Failure of catalyst to perform as required because of catalyst poisoning or fouling shall not be recognized as a basis for a Rule 1100 enforcement exemption. [District Rule 1070 and 4703]

38. All NOx, CO, O2 and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NOx, CO and O2 analyzer as well as the NH3 emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4703]

39. Ammonia emission readings shall be conducted at the time the NOx, CO and O2 readings are taken. [District Rule 4703]

40. The permittee shall maintain records of: (1) the date and time of NOx, CO, NH3 and O2 measurements, (2) the O2 concentration in percent by volume and the measured NOx, CO and NH3 concentrations corrected to 3% O2, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH3 emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rule 4703]

41. Permittee shall report the following emission exceedance to the District: emission rates of NOx & CO on a three-hour rolling average and NSPS emission rate on one hour average. [District Rule 1070, 2201 and 4703]

42. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. This information may be recorded electronically. Daily entries in the operating log are not required for periods of non-operation. [District Rules 2520, 9.4.2 & 4703, 6.2.4]

43. Permittee shall maintain accurate records of all maintenance activities, periodic inspections, and repairs of SCR unit, water and NH3 injection systems, and their associated controller and instrumentation units. [District Rules 1070 and 4703]

44. Permittee shall comply in full with Rule 4001 (New Source Performance Standards, 40 CFR 60 Subpart GG) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

45. The owner or operator shall maintain all records for a period of five years from the date of entry and shall make such records available to the APCO upon request. [District Rules 1080, 2201, & 4703, 6.2.4] Federally Enforceable Through Title V Permit

46. Note: Formerly S-1129-50.
San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-1547-1061-5

Section: 13  Township: 26S  Range: 20E

Equipment Description:
3.5 MW Combined Cycle Gas Turbine Topping Cycle CoGeneration Lost Hills Unit #5

PERMIT UNIT REQUIREMENTS

1. Cogeneration unit shall include Allison Model 501-KB-5 48.7 MMBTU/hr gas-fired engine, synchronous electrical generator, unfired 22.5 MMBTU/hr steam generator, and inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

3. Turbine lube oil tank and generator gearbox lube oil tank shall vent only through fiber bed filter system or other District-approved control Device. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Gas turbine engine water injection rate shall be no less than 0.8/1.0 water to fuel ratio by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Gas turbine engine shall be equipped with continuously recording water to fuel injection rate monitoring system accurate to within +/- 5%. [District NSR Rule & 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

8. If water injection system is inoperative, gas turbine shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Evaporative cooler shall use only fresh and filtered water. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Compliance testing of lube oil vent and gearbox vent shall be required if visible emissions from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District Rule 1081] Federally Enforceable Through Title V Permit

13. Fuel gas sulfur content shall not exceed 19.5 ppmv as hydrogen sulfide (H2S) or 1.1 gr/100 scf as total fuel sulfur. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Except during periods of startup and shutdown, emissions rates shall not exceed any of the following: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr or VOC: 1.65 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
15. Except during periods of startup and shutdown, emissions rates (three hour rolling average) shall not exceed any of the following limits: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 150.6 lb/day) or CO: 200 ppmvd @15% O2 (equates to 524.0 lb/day). [District Rule 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

16. Startup and shutdown of the gas turbine, as defined in this permit and in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and two hours for shutdown, per occurrence. Emission concentrations subsequent to this startup period shall not exceed the limits specified in this permit except during shutdown. [40 CFR Subpart A 60.2] Federally Enforceable Through Title V Permit

17. Emissions shall not exceed any of the following limits: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day or VOC: 39.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emissions shall not exceed any of the following limits: NOx (as NO2): 150.6 lb/day or CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

20. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [40 CFR 60.332(a)(2) & 60.333(a)] Federally Enforceable Through Title V Permit

21. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 1.1 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 1.1 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. Performance testing shall be conducted under conditions representative of normal operation. [40 CFR 60.335(b), District Rule 4703, 6.3 & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 & 4703] Federally Enforceable Through Title V Permit

24. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

26. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

27. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rules 2520, 9.4.2 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

28. The owner or operator shall maintain all records for a period of five years from the date of entry and shall make such records available to the APCO upon request. [District Rules 1080 & 4703, 6.2.4] Federally Enforceable Through Title V Permit
29. Daily records of NOx and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

31. Permittee shall comply in full with Rule 4001 (New Source Performance Standards, 40 CFR 60 Subpart GG) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

32. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

33. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1129-51.

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Cogeneration unit shall include Allison Model 501-KB-5 48.7 MMBTU/hr gas-fired engine, synchronous electrical generator, unfired 22.5 MMBTU/hr steam generator, and inlet air evaporative cooler. [District NSR Rule] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

3. Turbine lube oil tank and generator gearbox lube oil tank shall vent only through fiber bed filter system or other District-approved control Device. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Gas turbine engine shall be equipped with continuously recording fuel gas flowrate monitor. [40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

5. Gas turbine engine shall be equipped with water injection system for NOx control. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Gas turbine engine water injection rate shall be no less than 0.8/1.0 water to fuel ratio by weight. [District NSR Rule] Federally Enforceable Through Title V Permit

7. Gas turbine engine shall be equipped with continuously recording water to fuel injection rate monitoring system accurate to within +/- 5%. [District NSR Rule & 40 CFR 60.334(a)] Federally Enforceable Through Title V Permit

8. If water injection system is inoperative, gas turbine shall be shut down. [District NSR Rule] Federally Enforceable Through Title V Permit

9. Evaporative cooler shall use only fresh and filtered water. [District NSR Rule] Federally Enforceable Through Title V Permit

10. Maximum emission rate of volatile organic compounds (VOC's) from turbine lube oil vent shall not exceed 0.02 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit

11. Compliance testing of lube oil vent and gearbox vent shall be required if visible emissions from either vent exceeds 5% opacity or equivalent Ringelmann 1/4. [District NSR Rule] Federally Enforceable Through Title V Permit

12. Waste heat recovery steam generator exhaust shall be equipped with permanent provisions to allow collection of gas samples consistent with EPA methods. [District Rule 1081] Federally Enforceable Through Title V Permit

13. Fuel gas sulfur content shall not exceed 19.5 ppmv as hydrogen sulfide (H2S) or 1.1 gr/100 scf as total fuel sulfur. [District NSR Rule] Federally Enforceable Through Title V Permit

14. Except during periods of startup and shutdown, emissions rates shall not exceed any of the following limits: PM10: 0.61 lb/hr; SOx (as SO2): 0.16 lb/hr or VOC: 1.65 lb/hr. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Except during periods of startup and shutdown, emissions rates (three hour rolling average) shall not exceed any of the following limits: NOx (as NO2): 35 ppmvd @ 15% O2 (equates to 150.6 lb/day) or CO: 200 ppmvd @15% O2 (equates to 524.0 lb/day). [District Rule 4703, 5.1.2, 5.2] Federally Enforceable Through Title V Permit

16. Startup and shutdown of the gas turbine, as defined in this permit and in 40 CFR Subpart A 60.2, shall not exceed a time period of two hours for startup and two hours for shutdown, per occurrence. Emission concentrations subsequent to this startup period shall not exceed the limits specified in this permit except during shutdown. [40 CFR Subpart A 60.2] Federally Enforceable Through Title V Permit

17. Emissions shall not exceed any of the following limits: PM10: 14.6 lb/day; SOx (as SO2): 3.8 lb/day or VOC: 39.6 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

18. Emissions shall not exceed any of the following limits: NOx (as NO2): 150.6 lb/day or CO: 107.8 lb/day. [District NSR Rule] Federally Enforceable Through Title V Permit

19. Daily records of NO2 and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request for a period of five years. [District Rule 1070, District NSR Rule] Federally Enforceable Through Title V Permit

20. NOx (as NO2) and SOx (as SO2) emission rates (1 hr average) shall not exceed NSPS standard of 150 ppmv-dry @ 15% O2, and 150 ppmv-dry @ 15% O2, respectively. [40 CFR 60.332(a)(2) & 60.333(a)] Federally Enforceable Through Title V Permit

21. Fuel sulfur content for a fuel source shall be measured weekly. Test reports of measured fuel sulfur content shall be maintained. If measured sulfur content is less than 1.1 gr/100 scf for 8 consecutive weeks for a fuel source, then the testing frequency shall be semi-annually. If any semi-annual testing show fuel sulfur content exceeds 1.1 gr/100 scf, weekly testing shall resume and exceedance shall be reported to APCO. [40 CFR 60.334(b)(c) & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

22. Performance testing to measure exhaust gas NOx and CO concentrations shall be conducted annually. Performance testing shall be conducted under conditions representative of normal operation. [40 CFR 60.335(b), District Rule 4703, 6.3 & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. The following test methods shall be used: NOx (ppmv) - EPA Methods 7E or 20, or ARB Method 100; CO (ppmv) - EPA Method 10 or 10B, or ARB Method 100; stack gas oxygen - EPA Method 3, 3A or 20, or ARB Method 100; and fuel gas sulfur content - ASTM D3246 or double GC for H2S and mercaptans, fuel gas hhv - ASTM D1826 or D1945 in conjunction with ASTM D3588. [40 CFR 60.335(b) and District Rules 1081 & 4703] Federally Enforceable Through Title V Permit

24. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit

25. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 day of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

26. Permittee shall install, operate and maintain in calibration a system which continuously measures and records elapsed time of turbine operation. [40 CFR 60.334(a) and District Rule 4703, 6.2.1] Federally Enforceable Through Title V Permit

27. Operator shall maintain a stationary gas turbine operating log that includes, on a daily basis the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation and quantity of fuel used. During days of gas turbine startup/shutdown, permittee shall maintain accurate daily records of natural gas consumption for normal operation and for the startup/shutdown periods. [District Rules 2520, 9.4.2 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

28. The owner or operator shall maintain all records for a period of five years from the date of entry and shall make such records available to the APCO upon request. [District Rules 1080 & 4703, 6.2.4] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
29. Daily records of NOx and CO emission calculations during days of startup/shutdown shall be maintained and such records shall be made readily available for District inspection upon request. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

30. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance shall be reported to the APCO. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions, turbine gas load and nitrogen content of the fuel during the period of excess emissions. [40 CFR 60.334(c)] Federally Enforceable Through Title V Permit

31. Permittee shall comply in full with Rule 4001 (New Source Performance Standards, 40 CFR 60 Subpart GG) requirements, including notification, recordkeeping and monitoring requirements. [District Rule 4001] Federally Enforceable Through Title V Permit

32. The owner or operator of any existing stationary gas turbine system (unless exempted because all turbines are under ownership or control and have NOx and CO emissions limits which are shown on the current Permit to Operate and which do not exceed the applicable Compliance Limits in Section 5.0) shall submit to the APCO for approval, an emissions control plan of all actions. The control plan shall include a schedule of increments of progress that will be taken to comply with the requirements of the applicable NOx Compliance Limit in Section 5.0 and Compliance Schedule in Section 7.0 of District Rule 4703 (as amended 4/25/02). [District Rule 4703, 6.1.5] Federally Enforceable Through Title V Permit

33. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit

34. Note: Formerly S-1129-52.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 gr/dscf in concentration at the point of discharge. [District Rule 4201; Rule 402 (Madera) and 404 (all 7 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 2201, 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702] Federally Enforceable Through Title V Permit

7. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit

8. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Rule 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rules 402 (Madera) and 404 (Fresno, Merced, Kern, Kings, San Joaquin, Stanislaus, Tulare). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The equipment shall not be operated within 1000 feet of any K-12 school. [District Rule 4102]

14. Engine shall only operate within the Heavy Oil Western Stationary Source. [District Rule 4701] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed 0.1 gr/dscf in concentration at the point of discharge. [District Rule 4201; Rule 402 (Madera) and 404 (all 7 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 2201, 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702] Federally Enforceable Through Title V Permit

7. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit

8. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Rule 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rules 402 (Madera) and 404 (Fresno, Merced, Kern, Kings, San Joaquin, Stanislaus, Tulare). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

13. The equipment shall not be operated within 1000 feet of any K-12 school. [District Rule 4102]

14. Engine shall only operate within the Heavy Oil Western Stationary Source. [District Rule 4701] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. Upon 7 days written notice to the District this engine may be designated as a dormant emission unit or an active emission unit. [District Rule 1070] Federally Enforceable Through Title V Permit

2. When designated as a dormant emissions unit fuel supply line shall be physically disconnected from the emission unit. [District Rule 2080] Federally Enforceable Through Title V Permit

3. The equipment shall not be operated within 1000 feet of any K-12 school. [District Rule 4102]

4. Engine shall only operate within the Heavy Oil Western Stationary Source. [District Rule 2201] Federally Enforceable Through Title V Permit

5. Only gasoline shall be used as fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

6. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance and testing purposes shall not exceed 100 hours per year, as determined by an operational nonresettable elapsed operating time meter. [District NSR Rule and District Rules 4701 and 4702] Federally Enforceable Through Title V Permit

7. The permittee shall operate a nonresettable fuel meter and a nonresettable elapsed operating time meter. In lieu of installing a nonresettable fuel meter, the owner or operator may use a non-resettable elapsed operating time meter in conjunction with the engine manufacturer's maximum rated fuel consumption to determine annual fuel usage. The owner or operator shall maintain these required meters in proper operating condition. The fuel meter shall be calibrated periodically per the recommendations of the manufacturer. [District Rules 2201 and 4702] Federally Enforceable Through Title V Permit

8. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

9. Particulate matter emissions shall not exceed at the point of discharge, 0.1 gr/dscf. [District Rule 4201; Rule 402 (Madera) and 404 (all 7 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

10. Unit shall be fired on gasoline with a sulfur content of less than 0.008% by weight. [Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

11. Operator shall maintain copies of fuel invoices and supplier certification of gasoline sulfur content. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

12. Records of operating hours shall be kept for units operating less than 200 hours per year. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
13. On all units which are not emergency or backup IC engines operating less than 200 hours per year, operator shall perform a source test for particulate emissions within six months of the initial Title V permit issuance. Source testing for particulate matter shall be performed according to EPA Method 5, stack gas velocity by EPA Method 2, and the stack gas moisture content by EPA Method 4. If the initial PM test result is less than or equal to 0.06 grain/dscf, then testing shall occur not less than once every 5 years. Otherwise testing shall occur not less than once every 24 months. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

14. Test results from an engine that represents a group of engines in terms of rated brake horsepower, engine make and series, operational conditions, fuel used, and control method, shall satisfy testing requirements provided this group of engines is owned and operated by a single owner/operator. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

15. The operator of an internal combustion (IC) engine shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

16. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Rules 406 (Fresno), 404 (Madera), 407 (Kern, Kings, San Joaquin, Stanislaus, Merced, Tulare). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

17. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rules 402 (Madera) and 404 (Fresno, Merced, Kern, Kings, San Joaquin, Stanislaus, Tulare). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

18. The permittee shall maintain records of hours of emergency and non-emergency operation. Records shall include the date, the number of hours of operation, the purpose of the operation (e.g., load testing, weekly testing, rolling blackout, general area power outage, etc.), and the type and quantity (cubic feet of gas or gallons of liquid) of fuel used. Such records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 1070 & District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
PERMIT UNIT REQUIREMENTS

1. Particulate matter emissions shall not exceed in concentration at the point of discharge 0.1 gr/dscf. [District Rule 4201; Rule 402 (Madera) and 404 (all 7 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

2. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Rule 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

3. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rules 402 (Madera) and 404 (Fresno, Merced, Kern, Kings, San Joaquin, Stanislaus, Tulare). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

4. The engine shall be operated with the timing retarded four degrees from the manufacturer's standard recommended timing. [District NSR Rule] Federally Enforceable Through Title V Permit

5. Engine shall be equipped with turbocharger and air to air aftercooler. [District NSR Rule] Federally Enforceable Through Title V Permit

6. Engine shall be equipped with positive crankcase ventilation (PCV) system or 90% efficient control device for visible crankcase emissions. [District NSR Rule] Federally Enforceable Through Title V Permit

7. This engine shall be operated only for required regulatory purposes and for start-up of cogeneration units S-1547-879, '880, '881, '148, '149, and '151 during utility power interruptions. [District NSR Rule] Federally Enforceable Through Title V Permit

8. If engine exhibits visible emissions greater than 1/2 Ringelmann aggregating more than three minutes in any one hour, District witnessed compliance testing of particulate matter emissions shall be conducted by independent testing laboratory. [District NSR Rule & District Rule 1081, 4.0] Federally Enforceable Through Title V Permit

9. Official test results and field data of each compliance test shall be submitted to the District within 60 days after collection. [District Rule 1081, 7.3] Federally Enforceable Through Title V Permit

10. This permit unit is approved to operate at only the following locations: SW/4 Sec. 2, T29S, R21E and SE/4 Sec. 32, T28S, R21E. [District NSR Rule] Federally Enforceable Through Title V Permit

11. The permittee shall notify the District Compliance Division of each location at which the operation is located in excess of 24 hours. Such notification shall be made no later than 48 hours after starting operation at the location. [District NSR Rule] Federally Enforceable Through Title V Permit

12. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

14. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

15. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit

16. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

17. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

18. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

19. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT REQUIREMENTS

1. NOx emissions shall not exceed 6.14 g/hp-hr. [District NSR Rule] Federally Enforceable Through Title V Permit

2. The engine shall be equipped with a positive crankcase ventilation (PCV) system or a crankcase emissions control device capable of at least 90% control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit

3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit

4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

5. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

7. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

8. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

10. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

12. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [17 CCR 93115]
PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. Operation of the engine shall not exceed 20 hours per year. Additional operating hours may be approved by the APCO if the permittee provides justification on a case-by-case basis. [District Rule 4702, 4.2.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. During operation of the engine, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

8. The permittee shall maintain monthly records of the date and number of hours of operation and records of operational characteristics monitoring. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rules 4201 and 4801; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with subsumed Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. Operation of the engine shall not exceed 20 hours per year. Additional operating hours may be approved by the APCO if the permittee provides justification on a case-by-case basis. [District Rule 4702, 4.2.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. During operation of the engine, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

8. The permittee shall maintain monthly records of the date and number of hours of operation and records of operational characteristics monitoring. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rules 4201 and 4801; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with subsumed Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101, 5.1] Federally Enforceable Through Title V Permit

2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

4. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

5. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

6. Operation of the engine shall not exceed 20 hours per year. Additional operating hours may be approved by the APCO if the permittee provides justification on a case-by-case basis. [District Rule 4702, 4.2.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

7. During operation of the engine, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

8. The permittee shall maintain monthly records of the date and number of hours of operation and records of operational characteristics monitoring. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

10. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.
11. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rules 4201 and 4801; Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

12. Compliance with permit conditions in the Title V permit shall be deemed compliance with subsumed Kern County Rule 404. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

2. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101] Federally Enforceable Through Title V Permit

3. This engine shall be equipped with either a positive crankcase ventilation (PCV) system that recirculates crankcase emissions into the air intake system for combustion, or a crankcase emissions control device of at least 90% control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit

4. The exhaust stack shall not be fitted with a rain cap or similar device that would impede vertical exhaust flow. [District Rule 4102] Federally Enforceable Through Title V Permit

5. NOx emission shall not exceed 5.8 g/hp-hr. [District Rule 2201] Federally Enforceable Through Title V Permit

6. The PM10 emission shall not exceed 0.16 g/hp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

8. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 5.7.4 and 17 CCR 93115] Federally Enforceable Through Title V Permit

9. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702, 5.7.2] Federally Enforceable Through Title V Permit

10. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115] Federally Enforceable Through Title V Permit

11. This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing and required regulatory purposes shall not exceed 20 hours per calendar year. [District Rule 2201, 4702, 4.2.1 and 17 CCR 93115] Federally Enforceable Through Title V Permit

12. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702, 5.7.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
13. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.), and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rules 4702, 5.7 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

14. The permittee shall maintain monthly records of the type of fuel purchased, the amount of fuel purchased, date when the fuel was purchased, signature of the permittee who received the fuel, and signature of the fuel supplier indicating that the fuel was delivered. [District Rule 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

15. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 4702, 6.2 and 2520, 9.4.2 and 17 CCR 93115] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
PERMIT UNIT: S-1547-588-4  
EXPIRATION DATE: 05/31/2007

SECTION: SW16  
TOWNSHIP: 32S  
RANGE: 23E

EQUIPMENT DESCRIPTION:
4 MMBTU/HR JOHN ZINK MODEL #EEF STANDBY FLARE, 30 FT. OVERALL HEIGHT, WITH ONE PILOT AND TYPE #EEF JOHN ZINK ARRESTOR (LOCKWOOD)

PERMIT UNIT REQUIREMENTS

1. Only natural gas shall be used as pilot fuel. [District NSR Rule] Federally Enforceable Through Title V Permit

2. No more than 137 MSCFD of noncondensible gases from Lockwood Dehydration Facility and the Republic Lease shall be combusted in flare. [District NSR Rule] Federally Enforceable Through Title V Permit

3. Flare shall be operated only when steam generators S-1547-159, S-1547-656, or S-1547-657 become inoperable and not more than seventy-two hours in a month. [District NSR Rule] Federally Enforceable Through Title V Permit

4. Permittee shall keep accurate records of dates and volumes of gas flared and shall make such records available for District inspection upon request. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.
6. Visible emissions from flare shall be less than 5% opacity, except for a period or periods aggregating three minutes or less in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit

7. Only natural gas shall be used as pilot fuel. [District Rule 2201] Federally Enforceable Through Title V Permit

8. Volume of gas combusted in flare shall not exceed 1.2 MMscf/day and 3.15 MMscf/calendar quarter. [District Rule 2201] Federally Enforceable Through Title V Permit

9. Sulfur compound concentration (as H2S) of gas flared shall not exceed 961 ppmv. [District Rule 2201] Federally Enforceable Through Title V Permit

10. Efficiency of sulfur removal unit shall be maintained at not less than 95% by weight. [District Rule 2201] Federally Enforceable Through Title V Permit

11. Permittee shall demonstrate compliance with sulfur compound concentration limit and sulfur removal efficiency at least once every 12.6 MMscf of gas treated, by sample analysis of inlet and outlet gas streams of sulfur removal unit. [District Rule 2201] Federally Enforceable Through Title V Permit

12. Permittee shall maintain a record of all sample analysis made of inlet and outlet gas streams, and upon request, shall make the most recent record available for District inspection. [District Rule 2201] Federally Enforceable Through Title V Permit

13. Emissions shall not exceed PM10: 2.5 lb/MMscf, SOx: 240.65 lb/MMscf (as SO2), NOx: 140 lb/MMscf (as NO2), VOC: 2.8 lb/MMscf, CO: 35 lb/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit

14. Permittee shall keep accurate records of dates and volumes of gas flared. Such records shall be retained for a period of at least five years and be made readily available for District inspection upon request. [District Rule 2201 and 2520] Federally Enforceable Through Title V Permit
PERMIT UNIT: S-1547-913-5  EXPIRATION DATE: 05/31/2007

SECTION: 14  TOWNSHIP: 31S  RANGE: 22E

EQUIPMENT DESCRIPTION:
ABOVE GROUND GASOLINE STORAGE & DISPENSING SYSTEM INCLUDING ONE 1000 GALLON TANK SERVED BY
PHASE I VAPOUR RECOVERY SYSTEM AND 1 NOZZLE SERVED BY BALANCE PHASE II VAPOUR RECOVERY
SYSTEM (G-70-116-F) - NORTH MIDWAY

PERMIT UNIT REQUIREMENTS

1. The vapor recovery systems and their components shall be operated and maintained in accordance with the State
certification requirements. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

2. Any person conducting tests shall have completed a District-approved training program or the District’s orientation
class for testing and any subsequent required refresher class. [District Rule 4622] Federally Enforceable Through Title
V Permit

3. The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B at least once
every 12 months. [District Rule 4622] Federally Enforceable Through Title V Permit

4. The operator shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery
system consistent with Section 5.4.2 of Rule 4622. The program shall be documented in an operation and maintenance
(O&M) manual and shall at a minimum contain the following information: 1) All applicable ARB Executive Orders,
Approval Letters, and District Permits; 2) The manufacturer’s specifications and instructions for installation, operation,
repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction
provided by the manufacturer; 3) System and/or component testing requirements, including test schedules and passing
criteria for each of the standard tests. The owner/operator may include any non-ARB required diagnostic and other
tests as part of the testing requirements; 4) Protocol for performing periodic maintenance inspections including the
components to be inspected and the defects requiring repair; and 5) Additional O&M instructions, if any, that are
designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit
conditions, including replacement schedules for failure or wear prone components. [District Rule 4622] Federally
Enforceable Through Title V Permit

5. The operator shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility
in a calendar month as follows: A) less than 25,000 gallons - one day per week; B) 25,000 gallons or greater - five
days per week. All inspections shall be documented within the O&M manual. [District Rule 4622] Federally
Enforceable Through Title V Permit

6. The operator shall maintain monthly gasoline throughput records. [District Rule 4622] Federally Enforceable Through
Title V Permit

7. All records required by this permit shall be retained on-site for a period of at least five years, and shall be made
available for inspection upon request. [District Rule 4622] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
8. The operator shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622] Federally Enforceable Through Title V Permit

9. The District shall be notified within 24 hours of the facility's pass/fail status after the performance of each test. [District Rule 1081] Federally Enforceable Through Title V Permit

10. A warning that no person shall top off a fuel tank along with clear operating instructions shall be posted, noticeable and readable from any place from which gasoline may be dispensed. The instructions shall include prominently the SJVUAPCD and/or ARB toll-free number to which complaints regarding the operation of the system may be reported. [District Rule 4622, 5.8] Federally Enforceable Through Title V Permit

11. Any gasoline dispensing nozzle which is installed, repaired, or replaced shall be equipped with a hold-open latch. The hold-open latch shall be installed on the nozzle by the original nozzle manufacturer, or if retrofitted, shall be installed using components and procedures approved by the nozzle manufacturer. The requirements of this condition shall not apply to facilities where the use of hold-open latches is prohibited by law or the local fire control authority. [District Rule 4622, 5.10] Federally Enforceable Through Title V Permit

12. Each gasoline storage tank shall be equipped with a permanent submerged fill pipe. [District Rule 4621, 5.1.1] Federally Enforceable Through Title V Permit

13. Each aboveground storage tank shall be equipped with a pressure-vacuum valve set to within 10% of the maximum allowable working pressure of the tank. No gasoline shall be placed, stored, or held in any above-ground tank of 250 gallon capacity or more unless it is so equipped. [District Rule 4621, 5.1.2; 4623, 5.4] Federally Enforceable Through Title V Permit

14. Each storage tank subject to this permit shall be equipped with an ARB certified Phase I vapor recovery system, which shall prevent at least 95% by weight of all gasoline vapors displaced during the filling of storage tanks from entering the atmosphere. The transfer of gasoline from any delivery vessel to any stationary storage container with 250 gallon capacity or more shall not be allowed unless the container is equipped with an ARB certified Phase I system and maintained and operated according to manufacturers specifications. [District Rule 4621, 3.1 and 5.1.1] Federally Enforceable Through Title V Permit

15. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo tank which attest to the vapor integrity of the tank. [District Rule 4621, 5.2.1] Federally Enforceable Through Title V Permit

16. Each dispensing system shall be equipped with an ARB certified Phase II vapor recovery system which shall prevent at least 95% by weight of all gasoline vapors displaced during refueling of vehicles from entering the atmosphere. [District Rule 4622, 5.1] Federally Enforceable Through Title V Permit

17. Each ARB certified vapor recovery system shall be tested within 60 days of major modification or installation, except as otherwise allowed by this permit. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. [District Rule 4622, 6.2.2] Federally Enforceable Through Title V Permit

18. The ARB certified vapor recovery system and all of its components shall be maintained in good repair. Any ARB certified gasoline vapor recovery system, which has been installed and has been issued a permit to operate, shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the facility. [District Rule 4622, 5.3] Federally Enforceable Through Title V Permit
19. No gasoline shall be transferred into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations or in Section 5.4 of SJVUAPCD Rule 4622 (as amended February 17, 1994) until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

20. Any defects identified shall be tagged "Out of Order"; the tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defect has been repaired, replaced or adjusted. In the case of defects identified by the District, tagged equipment shall be rendered inoperable and the tag shall not be removed until the District has been notified of the repairs, and/or the District has inspected and authorized the tagged equipment for use. A log containing at least the following shall be maintained: date and type of defect identified and date repaired, replaced or corrected. [District Rules 2520, 9.4.2 and 4622, 5.5] Federally Enforceable Through Title V Permit

21. Vapor recovery systems and gasoline dispensing equipment shall be maintained leak-free as verified using EPA Test Method 21 and visual inspection. Leak testing shall be performed at least annually and within 60 days of all major modifications. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. A leak is defined as the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs or a reading as methane in excess of 10,000 ppm as determined using EPA Method 21. [District Rules 2520, 9.4.2 and 4622, 3.6, 5.6] Federally Enforceable Through Title V Permit

22. Each operator shall maintain a leak inspection log containing, at a minimum, the following: inspector's name, location and description of component type where any leak is found; date of leak detection, emission level (ppm) if applicable, and date leak is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. No person shall top off a motor vehicle fuel tank. [District Rule 4622, 5.9] Federally Enforceable Through Title V Permit

24. No owner or operator shall tamper with, or permit tampering with, the ARB certified vapor recovery system in a manner that would impair the operation or effectiveness of the system. [District Rule 4622, 5.11] Federally Enforceable Through Title V Permit

25. Operator shall maintain all records of required monitoring data and support information for inspection for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4621 except section 5.2.2 (as amended May 20, 1993), 4622 (as amended February 17, 1994), and 4623, section 5.4 (as amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. The requirements of County Rules 412 (Fresno, Kings, Stanislaus, Merced, and San Joaquin), 413 (Kern and Tulare), and 419 (Madera) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. The requirements of District Rules 4403 (as amended February 16, 1995), 4623, except section 5.4 (as amended December 17, 1992), and 4624 (as amended December 17, 1992) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40 CFR 60 Subparts XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The District shall be notified by the permittee 15 days prior to each test. The test results shall be submitted to the District no later than 30 days after each test. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-452.
PERMIT UNIT REQUIREMENTS

1. The vapor recovery systems and their components shall be installed, operated, and maintained in accordance with the State certification requirements. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

2. Any person conducting tests shall have completed a District-approved training program or the District’s orientation class for testing and any subsequent required refresher class. [District Rule 4622] Federally Enforceable Through Title V Permit

3. The permittee shall perform and pass a Static Leak Test for Aboveground Tanks using ARB TP-201.3B at least once every 12 months. [District Rule 4622] Federally Enforceable Through Title V Permit

4. The operator shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with Section 5.4.2 of Rule 4622. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) All applicable ARB Executive Orders, Approval Letters, and District Permits; 2) The manufacturer’s specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 3) System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements; 4) Protocol for performing periodic maintenance inspections including the components to be inspected and the defects requiring repair; and 5) Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622] Federally Enforceable Through Title V Permit

5. The operator shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility in a calendar month as follows: A) less than 25,000 gallons - one day per week; B) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O&M manual. [District Rule 4622] Federally Enforceable Through Title V Permit

6. The operator shall maintain monthly gasoline throughput records. [District Rule 4622] Federally Enforceable Through Title V Permit

7. All records required by this permit shall be retained on-site for a period of at least five years, and shall be made available for inspection upon request. [District Rule 4622] Federally Enforceable Through Title V Permit
8. The operator shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622] Federally Enforceable Through Title V Permit

9. The District shall be notified within 24 hours of the facility's pass/fail status after the performance of each test. [District Rule 1081] Federally Enforceable Through Title V Permit

10. A warning that no person shall top off a fuel tank along with clear operating instructions shall be posted, noticeable and readable from any place from which gasoline may be dispensed. The instructions shall include prominently the SJVUAPCD and/or ARB toll-free number to which complaints regarding the operation of the system may be reported. [District Rule 4622, 5.8] Federally Enforceable Through Title V Permit

11. Any gasoline dispensing nozzle which is installed, repaired, or replaced shall be equipped with a hold-open latch. The hold-open latch shall be installed on the nozzle by the original nozzle manufacturer, or if retrofitted, shall be installed using components and procedures approved by the nozzle manufacturer. The requirements of this condition shall not apply to facilities where the use of hold-open latches is prohibited by law or the local fire control authority. [District Rule 4622, 5.10] Federally Enforceable Through Title V Permit

12. Each gasoline storage tank shall be equipped with a permanent submerged fill pipe. [District Rule 4621, 5.1.1] Federally Enforceable Through Title V Permit

13. Each aboveground storage tank shall be equipped with a pressure-vacuum valve set to within 10% of the maximum allowable working pressure of the tank. No gasoline shall be placed, stored, or held in any above-ground tank of 250 gallon capacity or more unless it is so equipped. [District Rule 4621, 5.1.2; 4623, 5.4] Federally Enforceable Through Title V Permit

14. Each storage tank subject to this permit shall be equipped with an ARB certified Phase I vapor recovery system, which shall prevent at least 95% by weight of all gasoline vapors displaced during the filling of storage tanks from entering the atmosphere. The transfer of gasoline from any delivery vessel to any stationary storage container with 250 gallon capacity or more shall not be allowed unless the container is equipped with an ARB certified Phase 1 system and maintained and operated according to manufacturers specifications. [District Rule 4621, 3.1 and 5.1.1] Federally Enforceable Through Title V Permit

15. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo tank which attest to the vapor integrity of the tank. [District Rule 4621, 5.2.1] Federally Enforceable Through Title V Permit

16. Each dispensing system shall be equipped with an ARB certified Phase II vapor recovery system which shall prevent at least 95% by weight of all gasoline vapors displaced during refueling of vehicles from entering the atmosphere. [District Rule 4622, 5.1] Federally Enforceable Through Title V Permit

17. Each ARB certified vapor recovery system shall be tested within 60 days of major modification or installation, except as otherwise allowed by this permit. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. [District Rule 4622, 6.2.2] Federally Enforceable Through Title V Permit

18. The ARB certified vapor recovery system and all of its components shall be maintained in good repair. Any ARB certified gasoline vapor recovery system, which has been installed and has been issued a permit to operate, shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the facility. [District Rule 4622, 5.3] Federally Enforceable Through Title V Permit
19. No gasoline shall be transferred into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations or in Section 5.4 of SJVUAPCD Rule 4622 (as amended February 17, 1994) until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. [District Rule 4622, 5.4] Federally Enforceable Through Title V Permit

20. Any defects identified shall be tagged "Out of Order"; the tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defect has been repaired, replaced or adjusted. In the case of defects identified by the District, tagged equipment shall be rendered inoperable and the tag shall not be removed until the District has notified the repairs, and/or the District has inspected and authorized the tagged equipment for use. A log containing at least the following shall be maintained: date and type of defect identified and date repaired, replaced or corrected. [District Rules 2520, 9.4.2 and 4622, 5.5] Federally Enforceable Through Title V Permit

21. Vapor recovery systems and gasoline dispensing equipment shall be maintained leak-free as verified using EPA Test Method 21 and visual inspection. Leak testing shall be performed at least annually and within 60 days of all major modifications. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. A leak is defined as the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs or a reading as methane in excess of 10,000 ppm as determined using EPA Method 21. [District Rules 2520, 9.4.2 and 4622, 3.6, 5.6] Federally Enforceable Through Title V Permit

22. Each operator shall maintain a leak inspection log containing, at a minimum, the following: inspector's name, location and description of component type where any leak is found; date of leak detection, emission level (ppm) if applicable, and date leak is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

23. No person shall top off a motor vehicle fuel tank. [District Rule 4622, 5.9] Federally Enforceable Through Title V Permit

24. No owner or operator shall tamper with, or permit tampering with, the ARB certified vapor recovery system in a manner that would impair the operation or effectiveness of the system. [District Rule 4622, 5.11] Federally Enforceable Through Title V Permit

25. Operator shall maintain all records of required monitoring data and support information for inspection for a period of five years. [District Rule 2520, 9.5.2] Federally Enforceable Through Title V Permit

26. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4621 except section 5.2.2 (as amended May 20, 1993), 4622 (as amended February 17, 1994), and 4623, section 5.4 (as amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. The requirements of County Rules 412 (Fresno, Kings, Stanislaus, Merced, and San Joaquin), 413 (Kern and Tulare), and 419 (Madera) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. The requirements of District Rules 4403 (as amended February 16, 1995), 4623, except section 5.4 (as amended December 17, 1992), and 4624 (as amended December 17, 1992) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

29. The requirements of 40 CFR 60 Subparts XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

30. The District shall be notified by the permittee 15 days prior to each test. The test results shall be submitted to the District no later than 30 days after each test. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit

31. Note: Formerly S-1511-453.
PERMIT UNIT REQUIREMENTS

1. The vapor recovery systems and their components shall be installed, operated, and maintained in accordance with the State certification requirements. [District Rules 4621 and 4622] Federally Enforceable Through Title V Permit

2. No owner or operator shall tamper with, or permit tampering with, the ARB certified vapor recovery system in a manner that would impair the operation or effectiveness of the system. [District Rule 4622, 5.11] Federally Enforceable Through Title V Permit

3. Each gasoline storage tank shall be equipped with a permanent submerged fill pipe. [District Rule 4621, 5.1.1] Federally Enforceable Through Title V Permit

4. Each aboveground storage tank shall be equipped with a pressure-vacuum valve set consistent with the applicable CARB Executive Order. No gasoline shall be placed, stored, or held in any above-ground tank of 250 gallon capacity or more unless it is so equipped. [District Rule 4621, 5.1.2] Federally Enforceable Through Title V Permit

5. Any gasoline dispensing nozzle which is installed, repaired, or replaced shall be equipped with a hold-open latch. The hold-open latch shall be installed on the nozzle by the original nozzle manufacturer, or if retrofitted, shall be installed using components and procedures approved by the nozzle manufacturer. The requirements of this condition shall not apply to facilities where the use of hold-open latches is prohibited by law or the local fire control authority. [District Rule 4622, 5.10] Federally Enforceable Through Title V Permit

6. The facility gasoline throughput shall not exceed 4,000 gallons per day and 300,000 gallons per year. [District NSR Rule] Federally Enforceable Through Title V Permit

7. No gasoline delivery vessel shall be operated or be allowed to operate unless valid State of California decals are displayed on the cargo tank which attest to the vapor integrity of the tank. [District Rule 4621, 5.2.1] Federally Enforceable Through Title V Permit

8. No person shall top off a motor vehicle fuel tank. [District Rule 4622, 5.9] Federally Enforceable Through Title V Permit

9. A warning that no person shall top off a fuel tank along with clear operating instructions shall be posted, noticeable and readable from any place from which gasoline may be dispensed. The instructions shall include prominently the SJVUAPCD and/or ARB toll-free number to which complaints regarding the operation of the system may be reported. [District Rule 4622, 5.8] Federally Enforceable Through Title V Permit

10. The ARB certified vapor recovery system and all of its components shall be maintained in good repair. Any ARB certified gasoline vapor recovery system, which has been installed and has been issued a permit to operate, shall not be removed regardless of the amount of gasoline dispensed or how the gasoline is delivered to the facility. [District Rule 4622, 5.3] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
11. The permittee shall perform the "Minimum Maintenance Requirements" for the Hirt VCS-200 from CARB Executive Order G-70-139, and shall record all maintenance activities in a maintenance log. [District Rule 4622] Federally Enforceable Through Title V Permit

12. Any person conducting tests shall have completed a District-approved training program or the District's orientation class for testing and any subsequent required refresher class. [District Rule 4622] Federally Enforceable Through Title V Permit

13. The District shall be notified within 24 hours of the facility's pass/fail status after the performance of each test. [District Rule 1081] Federally Enforceable Through Title V Permit

14. The District shall be notified by the permittee 15 days prior to each test. The test results shall be submitted to the District no later than 30 days after each test. [District Rule 1081, 7.0] Federally Enforceable Through Title V Permit

15. No gasoline shall be transferred into vehicle fuel tanks if the vapor recovery system contains any defect listed in Section 94006 of Title 17 of the California Code of Regulations or in Section 5.4 of SJVUAPCD Rule 4622 (as amended February 17, 1994) until the defect has been repaired, replaced, or adjusted as necessary to correct the defect, and the District has reinspected the system or has authorized its use pending reinspection. [District Rule 4622, 5.5] Federally Enforceable Through Title V Permit

16. Any defects identified shall be tagged "Out of Order"; the tagged equipment shall be rendered inoperable and the tag(s) shall not be removed until the defect has been repaired, replaced or adjusted. In the case of defects identified by the District, tagged equipment shall be rendered inoperable and the tag shall not be removed until the District has been notified of the repairs, and/or the District has inspected and authorized the tagged equipment for use. A log containing at least the following shall be maintained: date and type of defect identified and date repaired, replaced or corrected. [District Rules 2520, 9.4.2 and 4622, 5.6] Federally Enforceable Through Title V Permit

17. Vapor recovery systems and gasoline dispensing equipment shall be maintained leak-free as verified using EPA Test Method 21 and visual inspection. Leak testing shall be performed at least annually and within 60 days of all major modifications. For this condition, a major modification is considered to be replacing, repairing, or upgrading 75% or more of the certified system. A leak is defined as the dripping at a rate of more than three (3) drops per minute of liquid containing VOCs or a reading as methane in excess of 10,000 ppm as determined using EPA Method 21. [District Rules 2520, 9.4.2 and 4622, 3.8, 5.7 and 6.3.4] Federally Enforceable Through Title V Permit

18. Each operator shall maintain a leak inspection log containing, at a minimum, the following: inspector's name, location and description of component type where any leak is found; date of leak detection, emission level (ppm) if applicable, and date leak is repaired. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

19. The operator shall implement a periodic maintenance inspection program for the certified Phase II vapor recovery system consistent with Section 5.4.2 of Rule 4622. The program shall be documented in an operation and maintenance (O&M) manual and shall at a minimum contain the following information: 1) All applicable ARB Executive Orders, Approval Letters, and District Permits; 2) The manufacturer's specifications and instructions for installation, operation, repair, and maintenance required pursuant to ARB Certification Procedure CP-201, and any additional instruction provided by the manufacturer; 3) System and/or component testing requirements, including test schedules and passing criteria for each of the standard tests. The owner/operator may include any non-ARB required diagnostic and other tests as part of the testing requirements; 4) Protocol for performing periodic maintenance inspections including the components to be inspected and the defects requiring repair; and 5) Additional O&M instructions, if any, that are designed to ensure compliance with the applicable rules, regulations, ARB Executive Orders, and District permit conditions, including replacement schedules for failure or wear prone components. [District Rule 4622] Federally Enforceable Through Title V Permit

20. The operator shall maintain on the premises a log of any repairs made to the certified Phase I or Phase II vapor recovery system. The repair log shall include the following: 1) date and time of each repair; 2) the name of the person(s) who performed the repair, and if applicable, the name, address and phone number of the person's employer; 3) description of service performed; 4) each component that was repaired, serviced, or removed; 5) each component that was installed as replacement, if applicable; and 6) receipts or other documents for parts used in the repair and, if applicable, work orders which shall include the name and signature of the person responsible for performing the repairs. [District Rule 4622] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.
21. The operator shall conduct periodic maintenance inspections based on the amount of gasoline dispensed by the facility in a calendar month as follows: A) less than 25,000 gallons - one day per week; or B) 25,000 gallons or greater - five days per week. All inspections shall be documented within the O & M Manual. [District Rule 4622] Federally Enforceable Through Title V Permit

22. The operator shall maintain daily, monthly, and annual gasoline throughput records. [District NSR Rule and District Rule 4622] Federally Enforceable Through Title V Permit

23. All records required by this permit shall be retained on-site for a period of at least five years, and shall be made available for inspection upon request. [District Rule 4622 and District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit

24. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rules 4621 except section 5.2.2 (as amended May 20, 1993), 4622 (as amended February 17, 1994), and 4623, section 5.4 (as amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

25. The requirements of County Rules 412 (Fresno, Kings, Stanislaus, Merced, and San Joaquin), 413 (Kern and Tulare), and 419 (Madera) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

26. The requirements of District Rules 4403 (as amended February 16, 1995), 4623, except section 5.4 (as amended December 17, 1992), and 4624 (as amended December 17, 1992) do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

27. The requirements of 40 CFR 60 Subparts XX do not apply to this permit unit. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

28. Note: Formerly S-1511-675

These terms and conditions are part of the Facility-wide Permit to Operate.
ATTACHMENT C

Detailed Facility List
<table>
<thead>
<tr>
<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
<th>FEE TOTAL</th>
<th>PERMIT STATUS</th>
<th>EQUIPMENT DESCRIPTION</th>
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- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR #49 DIS# 21946-77 WITH O2 CONTROLLER
- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH O2 CONTROLLER (#51, DIS# 21904-78)
- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR #52 DIS# 21832-78 WITH O2 CONTROLLER AND ANDERSON 2000 SOX SCRUBBER
- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#70 DIS# 27452-81) WITH C.E. NATCO SO2 SCRUBBER
- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR (#71 DIS# 27453-81) WITH C.E. NATCO SO2 SCRUBBER
- 62.5 MMBTU/Hr NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND SO2 SCRUBBER (#72 DIS# 27454-81)
- 62.5 MMBTU/Hr NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN 3.2 LOW NOX BURNER, FLUE GAS RECIRCULATION, AND SO2 SCRUBBER (#73 DIS# 26034-82)
- DORMANT 62.5 MMBTU/Hr NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION AND SO2 SCRUBBER (#74 DIS# 26025-82)
- 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#12-2C, DIS# 19175-75)
- 62.5 MMBTU/Hr NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER AND FLUE GAS RECIRCULATION (#12-2A, DIS# 21841-78)
- 62.5 MMBTU/Hr NATURAL GAS-FIRED STEAM GENERATOR [#12-2B, DIS# 22467-79] WITH A COEN QLN-ULN AND WITH FLUE GAS RECIRCULATION (FGR)
- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR #62 DIS# 27573-81 WITH O2 CONTROLLER
- DORMANT 62.5 MMBTU/Hr C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR #63 DIS# 27485-81 WITH O2 CONTROLLER
- DORMANT 62.5 MMBTU/Hr NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION, AUTHORIZED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#85, DIS# 28605-82)
## Detailed Facility Report

For Facility=1547 and excluding Deleted Permits
Sorted by Facility Number and Permit Number

<table>
<thead>
<tr>
<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
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<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#90, DIS# 27450-80) WITH O2 CONTROLLER (GEN SITE 2868)</td>
</tr>
<tr>
<td>S-1547-86-25</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND A FLUE GAS RECIRCULATION SYSTEM (#12-2D DIS# 21629-78)</td>
</tr>
<tr>
<td>S-1547-87-23</td>
<td>62,500 MBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#98, DIS# 27459-80)</td>
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<td>S-1547-92-20</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER, O2 CONTROLLER AND FLUE GAS RECIRCULATION (DIS# 27580-80) (12-2G)</td>
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<tr>
<td>S-1547-94-14</td>
<td>62,500 kBtu/hr steam generator</td>
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<td>1</td>
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<td>A</td>
<td>DORMANT 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM (#105 DIS# 27582-80) (GEN SITE 3363)</td>
</tr>
<tr>
<td>S-1547-95-14</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A COEN MODEL ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (#106, DIS# 27583-80) (GEN SITE 3363)</td>
</tr>
<tr>
<td>S-1547-96-16</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH ONE COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION, (#106 DIS 27583-80) (GEN SITE 3363)</td>
</tr>
<tr>
<td>S-1547-114-16</td>
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<td>3020-02 H</td>
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<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER, O2 CONTROLLER AND FLUE GAS RECIRCULATION, (MCOC# 708 (SOUTH MIDWAY), DIS# 27477-81)</td>
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<td>S-1547-116-20</td>
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<td>A</td>
<td>DORMANT 62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH FLUE GAS RECIRCULATION, (#123 DIS# 27577-81)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
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<td>62,500,000 BTU/HR</td>
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<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#122, DIS# 27576-81) WITH O2 CONTROLLER (GEN SITE 3428)</td>
</tr>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS FIRED STEAM (#121 DIS# 27575-81) WITH A COEN MODEL #QLN-UNL 3.2 BURNER WITH FLUE GAS RECIRCULATION (FGR) AND JOHN ZINK/TODD COOL FUEL SYSTEM</td>
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<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#120, DIS# 27574-81) WITH O2 CONTROLLER</td>
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<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#147, DIS# 27454-81) WITH O2 CONTROLLER (GEN SITE 121)</td>
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<td>S-1547-121-19</td>
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<td>3020-02 H</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#131, DIS# 28722-83) (CALSO)</td>
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<td>S-1547-122-19</td>
<td>62.5 MMBTU/HR</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#132, DIS# 28714-83) (CALSO LEASE)</td>
</tr>
<tr>
<td>S-1547-123-28</td>
<td>62.5 MMBlu/hr</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM AND PIPING FORM S-1547-1079, (#133, DIS# 28715-83) (GEN SITE 2972)</td>
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<td>S-1547-125-23</td>
<td>62.5 MMBlu/hr</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN QLN-UNL 3.2 BURNER AND FLUE GAS RECIRCULATION (#135, DIS# 28717-83) (GEN SITE 121)</td>
</tr>
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<td>S-1547-126-16</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-UNL LOW NOX BURNER AND FLUE GAS RECIRCULATION (#12-2J, DIS# 28708-83)</td>
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<td>S-1547-127-19</td>
<td>62.5 MMBlu/hr</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN QLN UNL 3.2 BURNER, O2 CONTROLLER, FLUE GAS RECIRCULATION (#12-2K, DIS# 28709-83), AND A JOHN ZINK/TODD COOL FUEL SYSTEM</td>
</tr>
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<td>62.5 MMBlu/hr</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-UNL LOW-NOX BURNER, O2 CONTROLLER, AND FLUE GAS RECIRCULATION, (MOOC #706 (SOUTH MIDWAY), DIS# 28710-83)</td>
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<td>62,500 KBTU/HR STEAM GENERATOR</td>
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<td>1,030.00</td>
<td>A</td>
<td>DORMANT EMISSIONS UNIT: 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#119, DIS# 28636-82)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-134-15</td>
<td>62,500 kBtu/hr burner</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR), APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS, (#167, DIS# 28638-82)</td>
</tr>
<tr>
<td>S-1547-139-15</td>
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<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION, AND O2 CONTROLLER (12-2H, DIS# 28643-82) (GEN SITE 1924)</td>
</tr>
<tr>
<td>S-1547-141-23</td>
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<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS/VAPORE RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER, AN O2 CONTROLLER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND AIR POL SO2 SCRUBBER, (#126 DIS# 28602-81) (A/P DEHY)</td>
</tr>
<tr>
<td>S-1547-142-23</td>
<td>62,500 kBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPORE RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND SHARED SO2 SCRUBBER LISTED ON S-1547-141, (#127 DIS# 28603-81) (A/P DEHY)</td>
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<td>S-1547-143-24</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPORE RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULN LOW NOX BURNER, WITH FLUE GAS RECIRCULATION AND SHARED SO2 SCRUBBER LISTED ON S-1547-141, (#128 DIS# 28612-82) (ANDERSON/ FITZGERALD DEHY)</td>
</tr>
<tr>
<td>S-1547-144-26</td>
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<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPORE RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND SHARED SO2 SCRUBBER LISTED ON S-1547-141, (#129 DIS# 28613-82) (A/P DEHY)</td>
</tr>
<tr>
<td>S-1547-145-18</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPORE RECOVERY GAS-FIRED STEAM GENERATOR, WITH A COEN ULN BURNER AND FLUE GAS RECIRCULATION, AND SHARED SO2 SCRUBBER LISTED ON S-1547-141, (#130 DIS# 28721-33) (CALSO) ALTERNATE MONITORING SCHEME A</td>
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<td>S-1547-146-28</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
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<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR (#124, DIS# 27578-81), WITH A COEN ULN LOW NOX BURNER, O2 CONTROLLER, FLUE GAS RECIRCULATION (GEN SITE 2972)</td>
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<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#125, DIS# 27579-81) WITH O2 CONTROLLER.</td>
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<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-148-20</td>
<td>21.45 MW</td>
<td>3020-08A F</td>
<td>1</td>
<td>8,171.00</td>
<td>8,171.00</td>
<td>A</td>
<td>21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #1 WITH GENERAL ELECTRIC MODEL LM2500 PE GAS TURBINE AND UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR: RETROFIT THE UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR AND THE BYPASS STACK WITH SELECTIVE CATALYTIC REDUCTION (SCR) AND AMMONIA INJECTION FOR RULE 4703 COMPLIANCE AND ALLOW 60-DAY PERIOD TO TEST AND ADJUST SCR AND AMMONIA INJECTION SYSTEM</td>
</tr>
<tr>
<td>S-1547-149-19</td>
<td>21.45 MW</td>
<td>3020-08A F</td>
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<td>8,171.00</td>
<td>8,171.00</td>
<td>A</td>
<td>21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #2 WITH GENERAL ELECTRIC MODEL LM2500 PE GAS TURBINE, UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR EQUIPPED WITH SCR AND AMMONIA INJECTION, AND BYPASS STACK EQUIPPED WITH SCR AND AMMONIA INJECTION</td>
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<tr>
<td>S-1547-151-19</td>
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<td>3020-08A F</td>
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<td>21.45 MW GAS FIRED TURBINE ENGINE COGENERATION FACILITY #3 WITH GENERAL ELECTRIC MODEL LM2500 PE GAS TURBINE, UNFIRED WASTE HEAT RECOVERY STEAM GENERATOR EQUIPPED WITH SCR AND AMMONIA INJECTION, AND BYPASS STACK EQUIPPED WITH SCR AND AMMONIA INJECTION</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH COEN ULN BURNER, WITH FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#154, DIS# 39565-88) (CALSO)</td>
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<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#155, DIS# 33749-90)</td>
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<td>3020-02 H</td>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#155, DIS# 33303-89) (CALSO)</td>
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<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH COEN QLN LOW NOX BURNER (#A-1 DIS# 39578-88) (LOCKWOOD) AND FLUE GAS RECIRCULATION</td>
</tr>
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<td>S-1547-164-16</td>
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<td>3020-02 H</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER AND FLUE GAS RECIRCULATION; APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (KENDON 51)</td>
</tr>
<tr>
<td>S-1547-168-18</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN QLN LOW NOX BURNER (#J-1, DIS# 27467-71) AND FLUE GAS RECIRCULATION (WIER)</td>
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<td>S-1547-174-21</td>
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<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN LOW NOX BURNER AND FLUE GAS RECIRCULATION (WIER J-8, DIS# 27223-74)</td>
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### Detailed Facility Report

For Facility=1547 and excluding Deleted Permits
Sorted by Facility Number and Permit Number

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<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
<th>FEE TOTAL</th>
<th>PERMIT STATUS</th>
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<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN QLN LOW NOX BURNER (#J-11, DIS# 27457-81) AND FLUE GAS RECIRCULATION (WIER)</td>
</tr>
<tr>
<td>S-1547-176-28</td>
<td>62.5 MMBtu/hr</td>
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<td>1,030.00</td>
<td>A</td>
<td>RULE 4306 COMPLIANT DORMANT 62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR, WITH COEN QLN LOW NOX BURNER (#J-12, DIS# 27458-81) (WILBERT) WITH FLUE GAS RECIRCULATION</td>
</tr>
<tr>
<td>S-1547-179-18</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR THERMOTICS NATURAL GAS FIRED STEAM GENERATOR (#J-5 DIS# 27465-71) WITH O2 ANALYZER/CONTROLLER</td>
</tr>
<tr>
<td>S-1547-187-10</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR (#J-6 DIS# 28771-85) WITH O2 ANALYZER/CONTROLLER (GORE)</td>
</tr>
<tr>
<td>S-1547-190-20</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/TEOR GAS-FIRED STEAM GENERATOR WITH A COEN ULN BURNER, FLUE GAS RECIRCULATION, VAPOR RECOVERY PIPING FROM S-1135-21, AND APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (BUENA FE #6, DIS# 4624-82)</td>
</tr>
<tr>
<td>S-1547-223-2</td>
<td>1,260,000 GALLONS</td>
<td>3020-05 G</td>
<td>1</td>
<td>382.00</td>
<td>382.00</td>
<td>A</td>
<td>1,260,000 GALLON FLOATING ROOF WET OIL TANK WITH MECHANICAL SHOE PRIMARY SEAL AND ZERO GAP WIPER-TYPE SECONDARY SEAL. (WIER)</td>
</tr>
<tr>
<td>S-1547-234-27</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR, WITH COEN ULN BURNER AND FLUE GAS RECIRCULATION (#N-6, DIS# 27464-71) (NATIONAL)</td>
</tr>
<tr>
<td>S-1547-238-20</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN BURNER AND FLUE GAS RECIRCULATION (#N-1, DIS# 2746271) (NATIONAL)</td>
</tr>
<tr>
<td>S-1547-241-24</td>
<td>62.5 MMBlu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBlu/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH MITSUBISHI LO-NOX BURNER, STAGED COMBUSTION, FLUE GAS RECIRCULATION AND VAPOR PIPING FROM S-1547-707, (#100, DIS# 28692-82) (D&amp;E SANDS)</td>
</tr>
<tr>
<td>S-1547-242-14</td>
<td>62.5 MMBlu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBlu/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH MITSUBISHI LO-NOX BURNER, STAGED COMBUSTION, FLUE GAS RECIRCULATION AND VAPOR PIPING FROM S-1547-707, (#101, DIS# 28693-82) (D&amp;E SANDS) - DORMANT EMISSIONS UNIT (DEU)</td>
</tr>
<tr>
<td>S-1547-243-21</td>
<td>62.5 MMBlu/hour</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBlu/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH MITSUBISHI LO-NOX BURNER, STAGED COMBUSTION, FLUE GAS RECIRCULATION AND VAPOR PIPING FROM S-1547-707, (#102, DIS# 28732-83) (D&amp;E SANDS)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-244-22</td>
<td>62.5 MMBtu/hour</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS/VAPORECOVERY GAS FIRED STEAM GENERATOR, WITH MITSUBISHI LO-NOX BURNER, STAGED COMBUSTION, FLUE GAS RECIRCULATION AND VAPOR PIPING FROM S-1547-707, (#103, DIS# 28564-82) (D&amp;E SANDS)</td>
</tr>
<tr>
<td>S-1547-248-15</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR RECOVERY GAS FIRED STEAM GENERATOR, WITH COEN ULN BURNER AND FLUE GAS RECIRCULATION (#N-5, DIS# 28772-85) (NATIONAL)</td>
</tr>
<tr>
<td>S-1547-250-19</td>
<td>62.5 MMSTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR DANIEL INDUSTRIES' NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION AND COEN ULN BURNER, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS, (#153, DIS# 33747-90)</td>
</tr>
<tr>
<td>S-1547-251-15</td>
<td>5.0 MMBtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
<td>NATURAL GAS-FIRED TRICO SUPERIOR HEATER TREATER #V-201 WITH 5.0 MMBTU/HR MAXON MODEL M-PAKT BURNER (LOCKWOOD LEASE)</td>
</tr>
<tr>
<td>S-1547-252-12</td>
<td>4.2 MMBtu/hr</td>
<td>3020-02 F</td>
<td>1</td>
<td>607.00</td>
<td>607.00</td>
<td>A</td>
<td>NATURAL GAS FIRED TRICO SUPERIOR HEATER TREATER WITH A 4.2 MMBTU/HR MAXON MODEL M-PAKT NATURAL GAS-FIRED BURNER</td>
</tr>
<tr>
<td>S-1547-355-26</td>
<td>62.5 MMBTU/HR STEAM GENERATOR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS (#158, DIS# 39603-86)</td>
</tr>
<tr>
<td>S-1547-356-23</td>
<td>62.500 kBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR DANIEL INDUSTRIES' NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION (#159, DIS# 39602-88)</td>
</tr>
<tr>
<td>S-1547-357-19</td>
<td>62,500,000 BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR DANIEL INDUSTRIES' NATURAL GAS FIRED STEAM GENERATOR #160 DIS# 39601-88 WITH NORTH AMERICAN BURNER ASSEMBLY AND O2 CONTROLLER; ALSO APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-359-26</td>
<td>1657 wells</td>
<td>3020-09 A</td>
<td>1657</td>
<td>9.34</td>
<td>15,476.38</td>
<td>A</td>
<td>VAPORE COLLECTION AND CONTROL SYSTEM SERVING 1657 THERMALLY ENHANCED WALLS IN SECTIONS 1, 2, 3, 4, 10, 11, 12 OF T29S, R21E, SECTIONS 33, 34, 35 OF T28S, R21E</td>
</tr>
<tr>
<td>S-1547-361-14</td>
<td>62,500 kBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN ULTRA LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (#150, DIS# 39562-86) (CALSEO)</td>
</tr>
<tr>
<td>S-1547-362-17</td>
<td>62,500 KBTu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION (#151, DIS# 39563-86) (CALSEO)</td>
</tr>
<tr>
<td>S-1547-363-18</td>
<td>62,500 kBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION (#152, DIS# 39564-88) (CALSEO)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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</tr>
<tr>
<td>S-1547-381-2</td>
<td>42,000 GALLONS</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON CONE ROOF FUEL OIL STORAGE TANK #T-230 (AV/F DEHY)</td>
</tr>
<tr>
<td>S-1547-384-1</td>
<td>2,730,000 GALLONS</td>
<td>3020-05 G</td>
<td>1</td>
<td>382.00</td>
<td>382.00</td>
<td>A</td>
<td>2,730,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK WITH PV VENTS #T-470 CONNECTED TO VAPOR RECOVERY SYSTEM SHARED WITH S-1548-45 (OT&amp;M)</td>
</tr>
<tr>
<td>S-1547-414-7</td>
<td>60,000,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>60 MMBTU/HR KALDAIR MODEL P-20-E PIPE STANDBY FLARE, SULFA TREAT VESSEL, AND GAS HYDRATION AND DRAIN SYSTEM (AV/F DEHY)</td>
</tr>
<tr>
<td>S-1547-442-15</td>
<td>4200 gal tank</td>
<td>3020-05 A</td>
<td>1</td>
<td>75.00</td>
<td>75.00</td>
<td>A</td>
<td>4,200 GALLON FIXED ROOF TANK T-116 (10 FT DIAMETER X 8 FT HIGH) WITH VAPOR CONTROL SYSTEM INCLUDING PRE/AFTER COOLERS, SUCTION &amp; DISCHARGE KNOCKOUT VESSELS (S-1547-1204 AND 'S-1205), 2 -100 HP COMPRESSORS, 2-SULFUR SCRUBBING TOWERS, AND ASSOCIATED PIPING SERVING LOCKWOOD/REPUBLIC LEASES</td>
</tr>
<tr>
<td>S-1547-443-11</td>
<td>84,000 gal tank</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON FIXED ROOF (29.7 FT. DIAMETER X 26.25 FT. HIGH) CONE BOTTOM SURGE TANK T-115 CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)</td>
</tr>
<tr>
<td>S-1547-460-17</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON FIXED ROOF CLARIFIER TANK #T301, OILWATER FLOTATION CELL, AND VAPOR CONTROL SYSTEM SHARED BETWEEN TANKS S-1547-460, '461, '462, '463 &amp; '465, &amp; WELLS IN TEOR SYSTEM S-1547-708 (NATIONAL RECYCLE PLANT)</td>
</tr>
<tr>
<td>S-1547-461-7</td>
<td>42,000 gallons</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON (1,000 BBL) FIXED ROOF, WELDED PETROLEUM REJECT TANK (#T-110) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PTO S-1547-460 (NATIONAL DEHY)</td>
</tr>
<tr>
<td>S-1547-462-8</td>
<td>21,000 gallons</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>21,000 GALLON (500 BBL) WELDED, PETROLEUM FIXED ROOF SAND TANK (#T-500) WITH VAPOR CONTROL SYSTEM LISTED ON PTO # S-1547-460 (NATIONAL RECYCLE PLANT)</td>
</tr>
<tr>
<td>S-1547-463-7</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON (2,000 BBL) FIXED ROOF PETROLEUM STOCK TANK (#T-109) CONNECTED TO VAPOR CONTROL SYSTEM LISTED ON PTO S-1547-460 (NATIONAL DEHY)</td>
</tr>
<tr>
<td>S-1547-465-7</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON (3,000 BBL) WELDED, FIXED ROOF PETROLEUM STOCK TANK (#T-108) WITH VAPOR CONTROL SYSTEM LISTED ON S-1547-460 (NATIONAL DEHY)</td>
</tr>
<tr>
<td>S-1547-536-3</td>
<td>5 Uncontrolled cyclic wells</td>
<td>3020-09 B</td>
<td>5</td>
<td>9.34</td>
<td>46.70</td>
<td>A</td>
<td>5 UNCONTROLLED CYCLIC OIL WELLS</td>
</tr>
<tr>
<td>S-1547-584-14</td>
<td>210,000 gal tank</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK T-210 CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)</td>
</tr>
<tr>
<td>S-1547-585-12</td>
<td>210,000 gal tank</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF STOCK TANK T-220 (38.6 FT DIAMETER X 24 FT HIGH) CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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</tr>
<tr>
<td>S-1547-586-11</td>
<td>84,000 gal tank</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON FIXED ROOF (29.7 FT. DIAMETER X 16 FT. HIGH) STOCK TANK T-150 CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)</td>
</tr>
<tr>
<td>S-1547-587-11</td>
<td>84,000 gal tank</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON FIXED ROOF (29.7 FT. DIAMETER X 16 FT. HIGH) STOCK TANK T-160 CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)</td>
</tr>
<tr>
<td>S-1547-588-4</td>
<td>4,000,000 BTU/HR</td>
<td>3020-02 F</td>
<td>1</td>
<td>607.00</td>
<td>607.00</td>
<td>A</td>
<td>4 MMBTU/HR JOHN ZINK MODEL #EFP STANDBY FLARE, 30 FT. OVERALL HEIGHT, WITH ONE PILOT AND TYPE #EFP JOHN ZINK ARRESTOR (LOCKWOOD)</td>
</tr>
<tr>
<td>S-1547-604-1</td>
<td>42,000 GALLONS</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #T-405 (D&amp;E RECYCLE PLANT)</td>
</tr>
<tr>
<td>S-1547-607-1</td>
<td>84,000 GALLONS</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK #T-403 (D&amp;E RECYCLE PLANT)</td>
</tr>
<tr>
<td>S-1547-630-2</td>
<td>10,500 GALLON</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>15,500 GALLON FIXED ROOF PETROLEUM WASH TANK #T-4</td>
</tr>
<tr>
<td>S-1547-638-10</td>
<td>5,780 Wells</td>
<td>3020-09 B</td>
<td>5780</td>
<td>9.34</td>
<td>1,400.00</td>
<td>A</td>
<td>396 CLOSED VENT CYCLIC WELLS AND 5,384 CLOSED VENT STEAM DRIVE WELLS. (WESTSIDE)</td>
</tr>
<tr>
<td>S-1547-639-4</td>
<td>1,260,000 GALLONS</td>
<td>3020-05 G</td>
<td>1</td>
<td>382.00</td>
<td>382.00</td>
<td>A</td>
<td>1,260,000 GALLON EXTERNAL FLOATING ROOF TANK, 67 FT. DIA. BY 48 FT. TALL, WITH METALIC SHOE TYPE PRIMARY SEAL AND &quot;ZERO GAP&quot; FLEX-A-SEAL SECONDARY SEAL (WIER DEHY)</td>
</tr>
<tr>
<td>S-1547-643-18</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>5,000 BBL FIXED ROOF CRUDE OIL SURGE TANK T-410, 38.6 FT DIAMETER X 25 FT HIGH, WITH SHARED VAPOR CONTROL SYSTEM BETWEEN S-1547-643 TO -645, -647 TO -649, -652 TO -654 AND -673 (WIER CDF)</td>
</tr>
<tr>
<td>S-1547-644-7</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>ONE 84,000 GALLON FIXED ROOF, 29.7 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL STOCK TANK T-420, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
</tr>
<tr>
<td>S-1547-645-7</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>ONE 84,000 GALLON FIXED ROOF, 29.7 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL CLARIFIER TANK T-430, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
</tr>
<tr>
<td>S-1547-647-7</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>ONE 210,000 GALLON FIXED ROOF, 38.6 FT. DIAMETER X 24 FT. HIGH, CRUDE OIL SURGE TANK T-460, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
</tr>
<tr>
<td>S-1547-648-7</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>ONE 84,000 GALLON FIXED ROOF, 29.7 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL STOCK TANK T-470, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
</tr>
</tbody>
</table>
## Detailed Facility Report

For Facility=1547 and excluding Deleted Permits
Sort by Facility Number and Permit Number

<table>
<thead>
<tr>
<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
<th>FEE TOTAL</th>
<th>STATUS</th>
<th>EQUIPMENT DESCRIPTION</th>
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<tbody>
<tr>
<td>S-1547-649-7</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>ONE 84,000 GALLON FIXED ROOF, 26.7 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL CLARIFIER TANK T-480, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
</tr>
<tr>
<td>S-1547-652-7</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>ONE 210,000 GALLON FIXED ROOF, 38.6 FT. DIAMETER X 24. FT. HIGH, CRUDE OIL SKIM TANK T-600, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
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<tr>
<td>S-1547-653-7</td>
<td>21,000 gallons</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>ONE 21,000 GALLON FIXED ROOF, 15.3 FT. DIAMETER X 16 FT. HIGH, CRUDE OIL SLOP TANK T-610, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
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<tr>
<td>S-1547-654-8</td>
<td>21,000 gallons</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>ONE 21,000 GALLON FIXED ROOF, 21.5 FT. DIAMETER X 8 FT. HIGH, CRUDE OIL DRAIN TANK T-700, WITH VAPOR CONTROL SYSTEM SHARED BETWEEN S-1547-643 TO -645, -647 TO -649, &amp; -652 TO -654 (WIER CDF)</td>
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<tr>
<td>S-1547-656-15</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN ULN BURNER, WITH FLUE GAS RECIRCULATION (LOCKWOOD A-2, DIS# 39579-88) (NORTH MIDWAY)</td>
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<tr>
<td>S-1547-658-12</td>
<td>210,000 gal tank</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF (38.6 FT DIA. X 32 FT. HIGH) CRUDE OIL TREATING TANK T-114 CONNECTED TO VAPOR CONTROL SYSTEM SHARED WITH S-1547-442 (LOCKWOOD DEHY LEASE)</td>
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<tr>
<td>S-1547-663-15</td>
<td>5 MMBtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
<td>NATURAL GAS/LPG-FIRED HEATER TREATER #V-203 WITH ONE 5.0 MMBTU/HR MAXON MODEL M-PAKT BURNER AND HEAT CROSSOVER LINE TO UNFIRED HEATER TREATER SECTION (LOCKWOOD)</td>
</tr>
<tr>
<td>S-1547-664-12</td>
<td>10,800 Gal</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>HEATER TREATER #V-204 (LOCKWOOD DEHY) WITH A 240 BBL VESSEL WITH PRESSURE RELIEF VENT TO S-1547-586 OR S-1547-587 AND PERMIT-EXEMPT BURNER (NATURAL GAS-FIRED, 5 MMBTU/HR OR LESS)</td>
</tr>
<tr>
<td>S-1547-666-13</td>
<td>4.2 MMBtu/hr</td>
<td>3020-02 F</td>
<td>1</td>
<td>607.00</td>
<td>607.00</td>
<td>A</td>
<td>4.2 MMBTU/HR NATURAL GAS-FIRED HEATER TREATER (#4) WITH ONE 4.2 MMBTU/HR MAXON MODEL M-PAKT BURNER AND HEAT CROSSOVER LINE TO UNFIRED HEATER TREATER SECTION (NATIONAL)</td>
</tr>
<tr>
<td>S-1547-667-10</td>
<td>29,400 Gal</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>HEATER TREATER WITH A 700 BBL VESSEL WITH PRESSURE RELIEF VENT TO S-1547-461, S-1547-463, OR S-1547-465 AND PERMIT-EXEMPT BURNER (NATURAL GAS-FIRED, 5 MMBTU/HR OR LESS)</td>
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<tr>
<td>S-1547-683-4</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION (W-10, DIS# 34142-93, S.N. 51106-01) (WIER #10)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-684-4</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTUHR NATURAL GAS FIRED STEAM GENERATOR, WITH FLUE GAS RECIRCULATION (DIS# 34141-93, S.N. 51105-02) (WIER #9)</td>
</tr>
<tr>
<td>S-1547-697-25</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTUHR NATURAL GAS FIRED STEAM GENERATOR, EQUIPPED WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINK/TODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION (Q1-1A, DIS# 28617-52)</td>
</tr>
<tr>
<td>S-1547-699-2</td>
<td>78 hp IC Engine</td>
<td>3020-10 A</td>
<td>1</td>
<td>80.00</td>
<td>80.00</td>
<td>A</td>
<td>78 BHP PORTABLE EMERGENCY STANDBY DIESEL FIRED JOHN DEERE MODEL CD4239F IC ENGINE POWERING AIR COMPRESSOR (DEHY 27)</td>
</tr>
<tr>
<td>S-1547-700-2</td>
<td>78 hp IC engine</td>
<td>3020-10 A</td>
<td>1</td>
<td>80.00</td>
<td>80.00</td>
<td>A</td>
<td>78 BHP PORTABLE EMERGENCY STANDBY DIESEL FIRED JOHN DEERE MODEL 4239DF IC ENGINE POWERING AIR COMPRESSOR (DEHY 20)</td>
</tr>
<tr>
<td>S-1547-703-2</td>
<td>209 hp</td>
<td>3020-10 C</td>
<td>1</td>
<td>240.00</td>
<td>240.00</td>
<td>A</td>
<td>PORTABLE EMERGENCY STANDBY 209 BHP GASOLINE FIRED WAUKESHA MODEL 145GZU IC ENGINE POWERING ELECTRICAL GENERATOR (BELRIDGE MAIN OFFICE)</td>
</tr>
<tr>
<td>S-1547-704-12</td>
<td>41 TEOR wells w/ vapor recovery</td>
<td>3020-09 A</td>
<td>41</td>
<td>9.34</td>
<td>382.94</td>
<td>A</td>
<td>TEOR OPERATION WELL VENT VAPOR CONTROL SYSTEM CONSISTING OF COMPRESSOR(S), PUMP(S), PRESSURE VESSEL(S), AND COOLER(S) SERVING 41 STEAM DRIVE WELLS, TANKS, FREE WATER KNOCKOUTS, AND OTHER VESSELS</td>
</tr>
<tr>
<td>S-1547-707-8</td>
<td>37 wells</td>
<td>3020-09 A</td>
<td>37</td>
<td>9.34</td>
<td>345.58</td>
<td>A</td>
<td>THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION SYSTEM SERVING 37 STEAM-DRIVE CRUDE OIL PRODUCTION WELLS, LIQUID KNOCKOUT SEPARATOR(S), COOLER(S), VAPOR COMPRESSOR(S), VAPOR COLLECTION PIPING AND PIPING FROM INLET SEPARATOR VESSELS, SULFATREAT SYSTEM WITH TWO SCRUBBERS AND SEPARATOR VESSELS (D&amp;E)</td>
</tr>
<tr>
<td>S-1547-708-7</td>
<td>43 TEOR Wells</td>
<td>3020-09 A</td>
<td>43</td>
<td>9.34</td>
<td>401.52</td>
<td>A</td>
<td>THERMALLY ENHANCED OIL RECOVERY OPERATION WITH WELL VENT VAPOR COLLECTION SYSTEM SERVING FORTY-THREE (43) STEAM ENHANCED OIL PRODUCTION WELLS (NATIONAL)</td>
</tr>
<tr>
<td>S-1547-709-17</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN, LOW NOX BURNER AND FLUE GAS RECIRCULATION (3-2 DIS# 5401-72) (BELRIDGE 3-2)</td>
</tr>
<tr>
<td>S-1547-714-8</td>
<td>545 Controlled Wells</td>
<td>3020-09 A</td>
<td>545</td>
<td>9.34</td>
<td>5,090.30</td>
<td>A</td>
<td>TEOR OPERATION WITH UP TO 545 STEAM ENHANCED WELLS SERVED BY WELL VENT VAPOR CONTROL SYSTEM AND SULFUR REMOVAL SYSTEM - LOST HILLS OIL FIELD (SEC. 12&amp;13, T26S, R20E AND SEC. 18&amp;19, T26S, R21E)</td>
</tr>
<tr>
<td>S-1547-719-12</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR GAS FIRED STEAM GENERATOR, WITH NORTH AMERICAN MODEL 4131G LO-NOX BURNER ASSEMBLY, CUSTOM FABRICATED FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER. (#2-1D) (BELRIDGE)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>AMOUNT</td>
<td>TOTAL</td>
<td>STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-722-9</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL #QLN-ULN 3.2 LOW-NOX BURNER AND FLUE GAS RECIRCULATION (FGR) (#1-1C. BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-723-10</td>
<td>62,5000 kBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN 3.2 LOW NOX BURNER AND A FLUE GAS RECIRCULATION (FGR) SYSTEM (#2-5D) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-725-14</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (#1-1B) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-726-8</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (#3-2P) (BELRIDGE)</td>
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<tr>
<td>S-1547-727-17</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR EQUIPPED WITH A COEN MODEL #QLN-ULN 3.2 LO-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND AN OXYGEN ANALYZER/CONTROLLER (#3-2A) (BELRIDGE)</td>
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<tr>
<td>S-1547-728-18</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW-NOX BURNER AND FLUE GAS RECIRCULATION (3-2B) (BELRIDGE)</td>
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<tr>
<td>S-1547-729-9</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR STRUTHERS GAS FIRED STEAM GENERATOR, WITH A COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#3-2K. DIS #5406-74) (BELRIDGE)</td>
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<tr>
<td>S-1547-733-9</td>
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<td>3020-02 H</td>
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<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (#2-3F) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-734-18</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR C.E. NATCO GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LO-NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#3-2L) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-735-15</td>
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<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN ULN BURNER, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (BELRIDGE #3-2D)</td>
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<tr>
<td>S-1547-736-14</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN LO-NOX BURNER, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (BELRIDGE #3-2E)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-737-12</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS- FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, JOHN ZINKTODD COOL FUEL SYSTEM, FLUE GAS RECIRCULATION (FGR) SYSTEM, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (BELRIDGE #3-2G)</td>
</tr>
<tr>
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<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2F) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-742-12</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (#3-2H) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-743-12</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR EQUIPPED WITH A COEN QLN ULN LOW-NOX BURNER, JOHN ZINKTODD COOL FUEL SYSTEM, AND FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#3-2I) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-744-13</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-745-9</td>
<td>62,500 kBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN 3.2 LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) SYSTEM, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3A) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-746-14</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
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<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3B) (BELRIDGE)</td>
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<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-3C) (BELRIDGE)</td>
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<td>PERMIT STATUS</td>
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<td>62.5 MMBTU/H TR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND PIPING FROM TEOR WELL VENT VAPOR RECOVERY SYSTEM S-1547-819 (MOCO #701) (SOUTH MIDWAY)</td>
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## Detailed Facility Report

**For Facility=1547 and excluding Deleted Permits**

Sorted by Facility Number and Permit Number

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<th>FEE DESCRIPTION</th>
<th>PERMIT RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
<th>FEE TOTAL</th>
<th>PERMIT STATUS</th>
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<td>S-1547-793-12</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR (401G) WITH COEN MODEL ULN ULTRA LOW NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPORE CONTROL SYSTEM S-1547-714 - LOST HILLS 2 LEASE</td>
</tr>
<tr>
<td>S-1547-794-11</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPORE CONTROL SYSTEM S-1547-714 (401H) (LOST HILLS 2 LEASE)</td>
</tr>
<tr>
<td>S-1547-795-15</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR GAS-FIRED STEAM GENERATOR, WITH ONE GIDEON ULTRA LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPORE CONTROL SYSTEM S-1547-714. (401I) (LOST HILLS 2 LEASE)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-796-6</td>
<td>62.5 MBTU/HR</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR GAS-FIRED STEAM GENERATOR, WITH ONE COEN QLN-ULN LOW-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714. (401J) (LOST HILLS 2 LEASE)</td>
</tr>
<tr>
<td>S-1547-797-10</td>
<td>62,500 kBTU/hr burner</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL ULN BURNER AND WITH FLUE GAS RECIRCULATION (FGR) AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-819 (MOCO 693) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-798-17</td>
<td>62,500 kBTU/hr steam generator</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (SHALE #2, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-799-16</td>
<td>62,500 kBTU/hr steam generator</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (SHALE #3, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-800-17</td>
<td>62.5 MBTU/hr</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (SHALE #4, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-801-16</td>
<td>62,500 kBTU/hr steam generator</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (SHALE #5, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-802-15</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS/TEOR GAS FIRED STEAM GENERATOR (11-1G, BELRIDGE) WITH FLUE GAS RECIRCULATION AND QLN-ULN 3.2 LOW-NOX BURNER</td>
</tr>
<tr>
<td>S-1547-803-12</td>
<td>62.5 MBTU/hr</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN QLN-ULN LO-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359 (BELRIDGE #3-20)</td>
</tr>
<tr>
<td>S-1547-804-16</td>
<td>62,500 kBTU/hr</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (SOUDAN #4) (NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-805-18</td>
<td>62,500 kBTU/hr steam generator</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FINLEY #9, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-806-12</td>
<td>62.5 MBTU/HR STEAM GENERATOR</td>
<td>3020-02</td>
<td>H</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH QLN-ULN BURNER AND FLUE GAS RECIRCULATION (FINLEY #10, NORTH MIDWAY)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-807-20</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN ULTRA LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM (#2-5E) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-808-13</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL ULN LOW NOX BURNER, A FLUE GAS RECIRCULATION SYSTEM AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM (#11-1H) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-809-12</td>
<td>62.5 MBTU/HR STEAM GENERATOR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR GAS-FIRED C+E NATCO STEAM GENERATOR, WITH A COEN MODEL ULN LOW NOX BURNER, FLUE GAS RECIRCULATION AND OXYGEN ANALYZER/CONTROLLER. (#1-1D) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-810-11</td>
<td>62,500 kbtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR NATURAL GAS FIRED STEAM GENERATOR, WITH COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION (NEV #104) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-811-8</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR NATURAL GAS/VAPOUR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM (MOCO 680) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-812-10</td>
<td>62.5 MMBTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR NATURAL GAS AND VAPOUR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN BURNER AND FLUE GAS RECIRCULATION (MOCO 607) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-819-8</td>
<td>900 wells</td>
<td>3020-09 A</td>
<td>900</td>
<td>9.34</td>
<td>8,406.00</td>
<td>A</td>
<td>TEOR OPERATION WITH UP TO 900 STEAM DRIVE WELLS SERVED BY WELL CASING VENT VAPOR CONTROL AND CONTROL SYSTEM</td>
</tr>
<tr>
<td>S-1547-820-4</td>
<td>324 wells</td>
<td>3020-09 A</td>
<td>324</td>
<td>9.34</td>
<td>3,026.16</td>
<td>A</td>
<td>TEOR OPERATION WITH 324 WELLS SERVED BY VAPOR CONTROL SYSTEM WITH LIQUID KNOCK-OUT VESSELS, HEAT EXCHANGERS, &amp; COMPRESSORS, WITH VAPOUR PIPING TO APPROVED INJECTION WELLS (MIDWAY SUNSET FIELD)</td>
</tr>
<tr>
<td>S-1547-821-6</td>
<td>215 wells</td>
<td>3020-09 A</td>
<td>215</td>
<td>9.34</td>
<td>2,088.10</td>
<td>A</td>
<td>TEOR OPERATION WITH 215 WELLS SERVED BY VAPOR CONTROL SYSTEM WITH VAPOUR CONTROL PIPING TO APPROVED INJECTION WELLS (MIDWAY SUNSET FIELD)</td>
</tr>
<tr>
<td>S-1547-823-5</td>
<td>40 TEOR WELLS</td>
<td>3020-09 A</td>
<td>40</td>
<td>9.34</td>
<td>373.60</td>
<td>A</td>
<td>THERMALLY ENHANCED OIL RECOVERY SYSTEM SERVING 40 STEAM DRIVE WELLS, INCLUDING: LIQUID KNOCKOUT VESSELS, HEAT EXCHANGERS, AND COMPRESSORS. - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-825-6</td>
<td>62,500 kbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MBTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION WITH PLC CONTROL, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSABLE VAPOR PIPING FROM VAPOR CONTROL SYSTEM S-1547-714 (401L) (LOST HILLS 2 LEASE)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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</tr>
<tr>
<td>S-1547-826-14</td>
<td>62,500 kBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN QLN-ULN BURNER AND FLUE GAS RECIRCULATION (FINLEY #8, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-827-17</td>
<td>62,500 kBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR) SYSTEM (FINLEY #11, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-828-12</td>
<td>62.5 MM BTU/HR STEAM GENERATOR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH COEN ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FINLEY #12, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-829-13</td>
<td>62.5 MM BTU/HR STEAM GENERATOR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER, FLUE GAS RECIRCULATION (FGR) AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM (FINLEY #13, NORTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-830-11</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR GAS-FIRED STEAM GENERATOR, WITH A COEN ULN BURNER, A FLUE GAS RECIRCULATION (FGR) SYSTEM, OXYGEN MONITOR/CONTROLLER, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-714, (401K) (LOST HILLS 2 LEASE)</td>
</tr>
<tr>
<td>S-1547-831-11</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW-NOX BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM, (MOCO #809) (SOUTHWEST)</td>
</tr>
<tr>
<td>S-1547-832-11</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR C. E. NATCO GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER (#3-2C, BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-833-11</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR C. E. NATCO GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN LG-NOX BURNER ASSEMBLY, FLUE GAS RECIRCULATION, AND OXYGEN ANALYZER/CONTROLLER (#2-5F) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-834-9</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR, WITH A COEN QLN-ULN BURNER, FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-31) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-835-11</td>
<td>62.5 MM BTU/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN GLE ULTRA LOW-NOX BURNER AND FLUE GAS RECIRCULATION AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359, (#2-31) (BELRIDGE)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-836-10</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN QLN-ULN 3.2 LOW-NOX BURNER, WITH FLUE GAS RECIRCULATION (FGR) AND NON-CONDENSABLE PIPING FROM VAPOR CONTROL SYSTEM, (#1-1E) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-837-16</td>
<td>62.5 MMbtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS/VAPOR RECOVERY GAS FIRED STEAM GENERATOR WITH A COEN ULN LOW NOX BURNER, FLUE GAS RECIRCULATION, AND NON-CONDENSIBLE PIPING FROM VAPOR CONTROL SYSTEM S-1547-359. (#11-1F) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-838-2</td>
<td>40 UNCONTROLLED CYCLIC WELLS</td>
<td>3020-09 A</td>
<td>40</td>
<td>9.34</td>
<td>373.60</td>
<td>A</td>
<td>40 UNCONTROLLED CYCICALLY STEAMED ENHANCED CRUDE OIL PILOT TESTING WELLS, - VARIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-841-1</td>
<td>55,464 GALLONS</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>ONE 55,464 GALLON OILFIELD PRODUCTION SAND BASIN, - BELRIDGE</td>
</tr>
<tr>
<td>S-1547-843-11</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON PRODUCED WATER FIXED ROOF STORAGE TANK (#F501A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '884, '1005 TO '1011, AND '1025), INCLUDING LIQUID KNOCKOUT VESSELS (S-1547-1206 AND '1207), COMPRESSORS AND COOLERS, AND PIPING TO SULFUR SCRUBBER S-1547-819</td>
</tr>
<tr>
<td>S-1547-844-5</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON 40' DIA. FIXED ROOF RECLAIM OIL TANK (F401A) VENTED TO VAPOR CONTROL LISTED ON S-1547-843. - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-845-5</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON 30' DIA. FIXED ROOF PRODUCED WATER TANK (#F501B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-846-5</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GAL 30' DIA. FIXED ROOF PRODUCED WATER TANK (#F201A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
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<tr>
<td>S-1547-847-5</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GAL 30' DIA. FIXED ROOF PRODUCED WATER TANK (#F201B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
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<td>S-1547-848-5</td>
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<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON 40' DIA. FIXED ROOF RECLAIM OIL TANK (#F401B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
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<tr>
<td>S-1547-849-5</td>
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<td>3020-05 E</td>
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<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON 30' DIA. FIXED ROOF REJECT OIL TANK (F301A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>AMOUNT</td>
<td>TOTAL</td>
<td>STATUS</td>
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<tr>
<td>S-1547-850-5</td>
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<td>1</td>
<td>246.00</td>
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<tr>
<td>S-1547-851-5</td>
<td>210,000 gallons</td>
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<td>246.00</td>
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<tr>
<td>S-1547-852-5</td>
<td>210,000 gallons</td>
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<td>246.00</td>
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<td>S-1547-854-13</td>
<td>126,000 gallons</td>
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<td>246.00</td>
<td>246.00</td>
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</tr>
<tr>
<td>S-1547-855-5</td>
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<td>246.00</td>
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<tr>
<td>S-1547-856-5</td>
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<td>246.00</td>
<td>246.00</td>
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<tr>
<td>S-1547-857-5</td>
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<td>246.00</td>
<td>246.00</td>
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<tr>
<td>S-1547-858-5</td>
<td>63,000 GALLONS</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>S-1547-859-5</td>
<td>63,000 GALLONS</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
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<tr>
<td>S-1547-860-5</td>
<td>4,200 GALLONS</td>
<td>3020-05 A</td>
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<td>75.00</td>
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<td>S-1547-861-5</td>
<td>4,200 GALLONS</td>
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<td>1</td>
<td>75.00</td>
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Detailed Facility Report
For Facility=1547 and excluding Deleted Permits
Sorted by Facility Number and Permit Number

126,000 GALLON 30' DIA. FIXED ROOF REJECT OIL TANK (#F301B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

210,000 GALLON, 40' DIA. FIXED ROOF LACT OIL TANK (F101A) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

210,000 GALLON, 40' DIA. FIXED ROOF LACT OIL TANK (#F101B) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

210,000 GALLON, 40' DIA. FIXED ROOF LACT OIL TANK (#F101C) SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY

126,000 GALLON (3,000 BBL) FIXED ROOF REJECT OIL TANK WITH VAPOR CONTROL SYSTEM SHARED WITH S-1547-854 TO '863, '990, '991, '992, '1152, '1159, AND '1160 INCLUDING VAPOR COMPRESSORS, COMPRESSOR RECYCLE COOLER, LIQUID KNOCKOUT VESSELS (INCLUDING FWKO #D-101A), AND PIPING TO SULFUR REMOVAL SYSTEM S-1547-714 (LOST HILLS)

126,000 GALLON (3000 BBL) 30' DIA. FIXED ROOF RECLAIM OIL TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

126,000 GALLON (3000 BBL) 30' DIA. FIXED ROOF LACT TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

126,000 GALLON (3000 BBL) 30' DIA. FIXED ROOF LACT TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

63,000 GALLON (1500 BBL) 22' DIA. CONE BOTTOM CONSTANT LEVEL CLARIFIER TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

63,000 GALLON (1500 BBL) 22' DIA. FLAT BOTTOM CLARIFIER TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

4,200 GALLON (100 BBL) 10' DIA. PIT TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)

4,200 GALLON (100 BBL) 10' DIA. PIT TANK VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)
<table>
<thead>
<tr>
<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
<th>FEE TOTAL</th>
<th>PERMIT STATUS</th>
<th>EQUIPMENT DESCRIPTION</th>
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<tbody>
<tr>
<td>S-1547-862-4</td>
<td>65 HP</td>
<td>3020-01 C</td>
<td>1</td>
<td>197.00</td>
<td>197.00</td>
<td>A</td>
<td>65 HP WEMCO INDUCED GAS FLOATATION UNIT (OILWATER SEPARATOR) VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)</td>
</tr>
<tr>
<td>S-1547-863-4</td>
<td>65 HP</td>
<td>3020-01 C</td>
<td>1</td>
<td>197.00</td>
<td>197.00</td>
<td>A</td>
<td>65 HP WEMCO INDUCED GAS FLOATATION UNIT (OILWATER SEPARATOR) VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-854 (LOST HILLS)</td>
</tr>
<tr>
<td>S-1547-864-1</td>
<td>86,026 GALLON</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>86,026 GALLONS (46 FT X 50 FT X 10 FT MAXIMUM DEPTH) SAND BASIN (S9-101) - LOST HILLS</td>
</tr>
<tr>
<td>S-1547-865-9</td>
<td>210,000 gallon (5,000 bbl) tank</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>5,000 BBL (210,000 GAL) FIXED ROOF CONE BOTTOM CLARIFIER TANK WITH VAPOR CONTROL, INCLUDING 4 COMPRESSORS, 2 COMPRESSOR RECYCLE COOLERS, LIQUID KNOCKOUT VESSELS, &amp; PIPING TO APPROVED GAS DISPOSAL WELLS - NORTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-866-4</td>
<td>210,000 GALLONS</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF, CONE BOTTOM CLARIFIER TANK SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-867-6</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF, REJECT OIL TANK (F-103) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-868-4</td>
<td>210,000 GALLONS</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF REJECT OIL TANK (F203) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-869-5</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF LACT TANK (F-105) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-870-4</td>
<td>210,000 GALLONS</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF LACT TANK (F205) SERVED BY VAPOR CONTROL SYSTEM S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-871-5</td>
<td>126,000 gallon Reclaim tank</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON FIXED ROOF RECLAIM OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-872-6</td>
<td>126,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>126,000 GALLON FIXED ROOF RECLAIM OIL TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
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<tr>
<td>S-1547-873-4</td>
<td>210,000 GALLONS</td>
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<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF RECLAIM OIL TANK (F204) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-874-5</td>
<td>10,500 gallons</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>10,500 GALLON FIXED ROOF PIT TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<td>S-1547-875-5</td>
<td>10,500 gallons</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>10,500 GALLON FIXED ROOF PIT TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY (REISSUED 11/16/05)</td>
</tr>
<tr>
<td>S-1547-876-3</td>
<td>INDUCED GAS FLOATATION</td>
<td>3020-06</td>
<td>1</td>
<td>105.00</td>
<td>105.00</td>
<td>A</td>
<td>INDUCED GAS FLOATATION UNIT WITH VAPOR CONTROL - NORTH MIDWAY (REISSUED 11/16/05)</td>
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<tr>
<td>S-1547-877-3</td>
<td>INDUCED GAS FLOATATION</td>
<td>3020-06</td>
<td>1</td>
<td>105.00</td>
<td>105.00</td>
<td>A</td>
<td>INDUCED GAS FLOATATION UNIT WITH VAPOR CONTROL - NORTH MIDWAY</td>
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<tr>
<td>S-1547-879-7</td>
<td>3.2 MW</td>
<td>3020-08A C</td>
<td>1</td>
<td>1,533.00</td>
<td>1,533.00</td>
<td>A</td>
<td>SOLAR CENTAUR MODEL T4500, 3.2 MW, 61.5 MMBTU/HR HEAT INPUT, GAS-FIRED GAS TURBINE ENGINE/GENERATOR WITH INLET AIR EVAPORATIVE COOLER AND H2O INJECTION, 38.7 MM BTU/HR DUCT BURNER, AND S.C.R. WITH AMMONIA INJECTION. - BELRIDGE</td>
</tr>
<tr>
<td>S-1547-880-7</td>
<td>3.2 MW</td>
<td>3020-08A C</td>
<td>1</td>
<td>1,533.00</td>
<td>1,533.00</td>
<td>A</td>
<td>SOLAR CENTAUR MODEL T4500, 3.2 MW, 61.5 MM BTU/HR HEAT INPUT, GAS-FIRED GAS TURBINE (COGEN UNIT #B) ENGINE/GENERATOR WITH INLET AIR EVAPORATIVE COOLER AND H2O INJECTION, 38.7 MM BTU/HR DUCT BURNER, AND S.C.R. WITH AMMONIA INJECTION. - BELRIDGE</td>
</tr>
<tr>
<td>S-1547-881-7</td>
<td>3.2 MW</td>
<td>3020-08A C</td>
<td>1</td>
<td>1,533.00</td>
<td>1,533.00</td>
<td>A</td>
<td>SOLAR CENTAUR MODEL T4500, 3.2 MW, 61.5 MM BTU/HR HEAT INPUT, GAS-FIRED GAS TURBINE (COGEN UNIT #C) ENGINE/GENERATOR WITH INLET AIR EVAPORATIVE COOLER, H2O INJECTION, 38.7 MM BTU/HR DUCT BURNER, AND S.C.R. WITH AMMONIA INJECTION. - BELRIDGE</td>
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<tr>
<td>S-1547-882-5</td>
<td>40 HP ELECTRIC MOTOR RATING</td>
<td>3020-01 B</td>
<td>1</td>
<td>117.00</td>
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<td>A</td>
<td>WEMCO INDUCED GAS FLOTATION UNIT (# M301A) SERVED BY A VAPOR CONTROL SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '862, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-884-6</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON SAND DUMP TANK (FG601) VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-843 AND PIPING TO SULFUR SCRUBBING SYSTEM S-1547-819. - SOUTH MIDWAY</td>
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<tr>
<td>S-1547-885-15</td>
<td>62.5 MM BTU/HR STEAM GENERATOR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR NATURAL GAS (AND VAPOR RECOVERY GAS) FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND FLUE GAS RECIRCULATION (MOCO #603) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-886-14</td>
<td>62.5 MM BTU/HR STEAM GENERATOR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS (AND VAPOR RECOVERY GAS) FIRED STEAM GENERATOR WITH A COEN ULN BURNER AND FLUE GAS RECIRCULATION (MOCO #601) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-888-15</td>
<td>315,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>7,500 BBL FIXED ROOF PETROLEUM STORAGE TANK F-4304 VENTED TO SHARED VAPOR COLLECTION SYSTEM WITH COMPRESSOR(S), PUMP(S), COOLER(S) LIQUID KNOCKOUT(S), PRESSURE VESSEL(S), PIPING TO S-1547-359, AND PIPING TO THE SECTION 32 GAS PLANT (FACILITY S-1543)</td>
</tr>
<tr>
<td>S-1547-889-9</td>
<td>315,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>315,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4305 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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</tr>
<tr>
<td>S-1547-892-9</td>
<td>60.5 hp</td>
<td>3020-01 C</td>
<td>1</td>
<td>197.00</td>
<td>197.00</td>
<td>A</td>
<td>13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4001 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-893-9</td>
<td>86,000 gallon</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4002 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-894-9</td>
<td>86,000 gallon</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4003 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-895-9</td>
<td>86,000 gallon</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4004 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
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<td>S-1547-896-9</td>
<td>86,000 gallon</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4005 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
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<tr>
<td>S-1547-897-9</td>
<td>86,000 gallon</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>13.6 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4006 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-898-9</td>
<td>23,500 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>23,500 GALLON CONDENSATE FWKO D-4701 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
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<tr>
<td>S-1547-899-9</td>
<td>23,500 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>23,500 GALLON CONDENSATE FWKO D-4702 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-902-5</td>
<td>5640 gallon</td>
<td>3020-05 A</td>
<td>1</td>
<td>75.00</td>
<td>75.00</td>
<td>A</td>
<td>SURGE VESSEL D-4601 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-903-5</td>
<td>26,000 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>25,908 GALLON INDUCED STATIC FLOATATION CELL D-4501 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-904-5</td>
<td>26,000 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>25,908 GALLON INDUCED STATIC FLOATATION CELL D-4502 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
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<tr>
<td>S-1547-905-5</td>
<td>26,000 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>25,908 GALLON INDUCED STATIC FLOATATION CELL D-4503 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>S-1547-906-9</td>
<td>85,653 gallon</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>13.5 FT X 80 FT FREEWATER KNOCKOUT VESSEL D-4007 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE LEASE</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
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<tr>
<td>S-1547-907-4</td>
<td>138,900 gallon sand basin</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>138,900 GALLON SAND BASIN, LONGITUDINALLY DIVIDED INTO TWO CELLS, TOTAL LIQUID HOLDING AREA NOT TO EXCEED 72 FT., BY 46 FT., WITH Dewatering equipment, AND MISC. ELECTRIC PUMPS, TOTAL RATING LESS THAN 100 HP. - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-911-3</td>
<td>890 hp ic engine</td>
<td>3020-10 E</td>
<td>1</td>
<td>602.00</td>
<td>602.00</td>
<td>A</td>
<td>890 HP DIESEL-FIRED EMERGENCY STANDBY I.C. ENGINE POWERING AN ELECTRICAL GENERATOR - BELRIDGE</td>
</tr>
<tr>
<td>S-1547-912-5</td>
<td>69 well TEOR operation</td>
<td>3020-09 A</td>
<td>69</td>
<td>9.34</td>
<td>644.46</td>
<td>A</td>
<td>69 WELL TEOR OPERATION INCLUDING WELL VENT VAPOR COLLECTION SYSTEM</td>
</tr>
<tr>
<td>S-1547-913-5</td>
<td>1 nozzle</td>
<td>3020-11 A</td>
<td>1</td>
<td>34.00</td>
<td>34.00</td>
<td>A</td>
<td>ABOVE GROUND GASOLINE STORAGE &amp; DISPENSING SYSTEM INCLUDING ONE 1000 GALLON TANK SERVED BY PHASE I VAPOR RECOVERY SYSTEM AND 1 NOZZLE SERVED BY BALANCE PHASE II VAPOR RECOVERY SYSTEM (G-70-116-F) - NORTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-914-5</td>
<td>1 nozzle</td>
<td>3020-11 A</td>
<td>1</td>
<td>34.00</td>
<td>34.00</td>
<td>A</td>
<td>ABOVE GROUND GASOLINE STORAGE &amp; DISPENSING SYSTEM INCLUDING ONE 2000 GALLON TANK SERVED BY PHASE I VAPOR RECOVERY SYSTEM AND 1 NOZZLE SERVED BY PHASE II VAPOR RECOVERY SYSTEM (G-70-116-F) - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-949-9</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4301 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-950-9</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4302 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-951-9</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4303 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-964-1</td>
<td>42,000 GALLONS</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON FIXED ROOF OIL SHIPPING TANK #TA007762, - NORTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-990-12</td>
<td>4.3 MMbtu/hr</td>
<td>3020-02 F</td>
<td>1</td>
<td>607.00</td>
<td>607.00</td>
<td>A</td>
<td>HEATER TREATER AND A HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM (LOST HILLS) WITH A PERMIT EXEMPT BURNER (NATURAL GAS-FIRED, 5.0 MMbtu/hr OR LESS)</td>
</tr>
<tr>
<td>S-1547-991-12</td>
<td>4.3 MMbtu/hr</td>
<td>3020-02 F</td>
<td>1</td>
<td>607.00</td>
<td>607.00</td>
<td>A</td>
<td>HEATER TREATER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM (LOST HILLS) WITH A PERMIT EXEMPT BURNER (NATURAL GAS-FIRED, 5.0 MMbtu/hr OR LESS)</td>
</tr>
<tr>
<td>S-1547-992-11</td>
<td>4.3 MMbtu/hr</td>
<td>3020-02 F</td>
<td>1</td>
<td>607.00</td>
<td>607.00</td>
<td>A</td>
<td>HEATER TREATER WITH A HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM (LOST HILLS) WITH A PERMIT EXEMPT BURNER (NATURAL GAS-FIRED, 5.0 MMbtu/hr OR LESS)</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>AMOUNT</td>
<td>TOTAL</td>
<td>STATUS</td>
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<tr>
<td>S-1547-994-15</td>
<td>4.2 MMbtu/hr</td>
<td>3020-02 F</td>
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<td>607.00</td>
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<tr>
<td>S-1547-995-14</td>
<td>5.0 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>515.00</td>
<td>815.00</td>
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<tr>
<td>S-1547-998-17</td>
<td>5 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
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<tr>
<td>S-1547-999-17</td>
<td>5.0 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
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<tr>
<td>S-1547-1000-17</td>
<td>5 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
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<tr>
<td>S-1547-1001-17</td>
<td>5 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
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<tr>
<td>S-1547-1005-14</td>
<td>5 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
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<tr>
<td>S-1547-1006-14</td>
<td>5.0 MMbtu/hr</td>
<td>3020-02 G</td>
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<td>815.00</td>
<td>815.00</td>
<td>A</td>
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<tr>
<td>S-1547-1007-14</td>
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<td>3020-02 G</td>
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<td>815.00</td>
<td>815.00</td>
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<tr>
<td>S-1547-1008-14</td>
<td>5 MMbtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
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</tbody>
</table>

- **4.2 MMbtu/hr** GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND VAPOR CONTROL LISTED ON S-1547-865 (NORTH MIDWAY)
- **5 MMbtu/hr** GAS-FIRED HEATER TREATER WITH ONE 5 MMbtu/hr JOHN ZINK MODEL S212.2-G-50 BURNER AND FOR AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - (NORTH MIDWAY UNIT B-101A - ALBERTA SHALE LEASE)
- **5.0 MMbtu/hr** GAS-FIRED HEATER TREATER WITH ONE 5.0 MMbtu/hr MAXON MODEL M-PAKT BURNER AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101B - ALBERTA SHALE LEASE)
- **5 MMbtu/hr** GAS-FIRED HEATER TREATER WITH ONE 5.0 MMbtu/hr MAXON MODEL M-PAKT BURNER AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-101C - ALBERTA SHALE LEASE)
- **GAS-FIRED HEATER TREATER WITH 5.0 MMbtu/hr MAXON MODEL M-PAKT BURNER AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-201A - FINLEY LEASE)
- **GAS-FIRED HEATER TREATER WITH 5.0 MMbtu/hr MAXON MODEL M-PAKT BURNER AND SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-865 (NORTH MIDWAY UNIT B-201C - FINLEY LEASE)
- **5.0 MMbtu/hr** NATURAL GAS-FIRED HEATER TREATER #D201A WITH ONE 5.0 MMbtu/hr MAXON MODEL M-PAKT BURNER AND HEAT CROSSOVER LINE TO UNFIRED HEATER TREATER SECTION WITH VAPOR CONTROL SYSTEM LISTED ON S-1547-843 (SOUTH MIDWAY)
- **5 MMbtu/hr** GAS-FIRED HEATER TREATER WITH ONE MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER AND HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION AND A FLUID TREATMENT CHAMBER SERVED BY A VAPOR RECOVERY SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY
- **GAS-FIRED HEATER TREATER WITH 5.0 MMbtu/hr MAXON MODEL M-PAKT BURNER S VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-843. (#D201O) (SOUTH MIDWAY)
- **HEATER TREATER WITH ONE 5.0 MMbtu/hr MAXON MODEL M-PAKT NATURAL GAS FIRED BURNER WITH HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-843. (#D201O) (SOUTH MIDWAY)
<table>
<thead>
<tr>
<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>AMOUNT</th>
<th>TOTAL</th>
<th>PERMIT STATUS</th>
<th>EQUIPMENT DESCRIPTION</th>
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<tr>
<td>S-1547-1009-14</td>
<td>5 MMBtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
<td>HEATER TREATER WITH ONE 5.0 MMBTU/HR MAXON MODEL M-PAKT NATURAL GAS-FIRED BURNER WITH HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-843. (#2015E) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-1010-14</td>
<td>5 MMBtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
<td>HEATER TREATER WITH ONE 5.0 MMBTU/HR MAXON MODEL M-PAKT NATURAL GAS-FIRED BURNER WITH HEAT CROSSOVER LINE TO THE UNFIRED HEATER TREATER SECTION, VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-843. (#2015F) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-1011-15</td>
<td>5 MMBtu/hr</td>
<td>3020-02 G</td>
<td>1</td>
<td>815.00</td>
<td>815.00</td>
<td>A</td>
<td>NATURAL GAS-FIRED HEATER TREATER (#201G) WITH ONE 5 MMBTU/HR MAXON MODEL M-PAKT BURNER WITH AND A FLUID TREATMENT CHAMBER SERVED BY VAPOR CONTROL SYSTEM LISTED ON PERMIT S-1547-843 (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-1014-9</td>
<td>315,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>315,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4306 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-1015-9</td>
<td>315,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>315,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK F-4307 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-1016-4</td>
<td>50,700 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>12 FT. DIA, X 60 FT. LONG FREE WATER KNOCKOUT VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-1017-4</td>
<td>50,700 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>12 FT. DIA, X 60 FT. LONG FREE WATER KNOCKOUT VESSEL VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-1018-5</td>
<td>210,000 gallons</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON OIL PROCESSING TANK VENTED TO VAPOR CONTROL SYSTEM LISTED ON S-1547-865 - NORTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-1019-5</td>
<td>26,000 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>25,908 GALLON INDUCED STATIC FLOATATION CELL FIXED D-4504 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 - SOUTH BELRIDGE FIELD</td>
</tr>
<tr>
<td>S-1547-1022-9</td>
<td>4 NOZZLES</td>
<td>3020-11 A</td>
<td>4</td>
<td>34.00</td>
<td>136.00</td>
<td>A</td>
<td>GASOLINE DISPENSING OPERATION WITH ONE 4,000 GALLON ABOVEGROUND STORAGE TANK SERVED BY TWO-POINT PHASE I VAPOR RECOVERY SYSTEM, AND 4 FUELING POINTS WITH 4 GASOLINE DISPENSING NOZZLES SERVED BY ASSIST PHASE II VAPOR RECOVERY SYSTEM (G-70-139) - BELRIDGE</td>
</tr>
<tr>
<td>S-1547-1025-5</td>
<td>100 HP ELECTRIC MOTOR RATING</td>
<td>3020-01 D</td>
<td>1</td>
<td>314.00</td>
<td>314.00</td>
<td>A</td>
<td>WEMCO MODEL 120X INDUCED GAS FLOATATION UNIT SERVED BY A VAPOR CONTROL SYSTEM (VRS SERVES PERMITS S-1547-843 TO '853, '882, '883, '884, '1005 TO '1011, AND '1025) - SOUTH MIDWAY</td>
</tr>
<tr>
<td>S-1547-1027-4</td>
<td>21,000 gallon</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>21,000 GALLON HYDROCHLORIC ACID STORAGE TANK #206A WITH FUME SCRUBBER SHARED WITH S-1547-1103 - SOUTH MIDWAY</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEERULE</td>
<td>QTY</td>
<td>FEE AMOUNT</td>
<td>FEE TOTAL</td>
<td>PERMIT STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
</tr>
<tr>
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</tr>
<tr>
<td>S-1547-1030-8</td>
<td>62,500 kBtu/hr burner</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) (MOCO #805) (SOUTH MIDWAY)</td>
</tr>
<tr>
<td>S-1547-1033-4</td>
<td>200 bhp</td>
<td>3020-10 C</td>
<td>1</td>
<td>240.00</td>
<td>240.00</td>
<td>A</td>
<td>200 HP OLYMPIAN DIESEL IC ENGINE WITH TURBOCHARGER AND CRANKCASE VENTILATION CONTROL SYSTEM POWERING AN EMERGENCY ELECTRICAL GENERATOR (COMPUTER ROOM BACKUP)</td>
</tr>
<tr>
<td>S-1547-1034-12</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MM BTU/HR NATURAL GAS-FIRED STEAM GENERATOR WITH A FLUE GAS RECIRCULATION (#11-1) (BELRIDGE) WITH A COEN MODEL QLN-ULN LOW NOX BURNER</td>
</tr>
<tr>
<td>S-1547-1035-13</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT COMPLIANT 62.5 MM BTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH A COEN MODEL QLN-ULN LOW NOX BURNER AND FLUE GAS RECIRCULATION (#11-1) (BELRIDGE)</td>
</tr>
<tr>
<td>S-1547-1038-1</td>
<td>210,000 GALLONS</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>210,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK - FITZGERALD LEASE</td>
</tr>
<tr>
<td>S-1547-1043-1</td>
<td>42,000 GALLONS</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK #CY34WT1.</td>
</tr>
<tr>
<td>S-1547-1044-1</td>
<td>42,000 GALLONS</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK #1GM58.</td>
</tr>
<tr>
<td>S-1547-1045-1</td>
<td>42,000 GALLONS</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>42,000 GALLON FIXED ROOF CRUDE OIL PRODUCTION TANK.</td>
</tr>
<tr>
<td>S-1547-1059-7</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR GAS-FIRED NATIONAL STEAM GENERATOR (HSG #180; DIS# 20616-51) WITH NORTH AMERICAN BURNER (TAYLOR LEASE)</td>
</tr>
<tr>
<td>S-1547-1060-5</td>
<td>3.5 MW electrical generation</td>
<td>3020-08A C</td>
<td>1</td>
<td>1,533.00</td>
<td>1,533.00</td>
<td>A</td>
<td>3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION LOST HILLS UNIT #4</td>
</tr>
<tr>
<td>S-1547-1061-5</td>
<td>3.5 MW electrical generation</td>
<td>3020-08A C</td>
<td>1</td>
<td>1,533.00</td>
<td>1,533.00</td>
<td>A</td>
<td>3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION LOST HILLS UNIT #5</td>
</tr>
<tr>
<td>S-1547-1062-5</td>
<td>3.5 MW electrical generation</td>
<td>3020-08A C</td>
<td>1</td>
<td>1,533.00</td>
<td>1,533.00</td>
<td>A</td>
<td>3.5 MW COMBINED CYCLE GAS TURBINE TOPPING CYCLE COGENERATION LOST HILLS UNIT #6</td>
</tr>
<tr>
<td>S-1547-1063-6</td>
<td>146 TEOR wells w/o vapor recovery</td>
<td>3020-09 B</td>
<td>146</td>
<td>9.34</td>
<td>1,363.64</td>
<td>A</td>
<td>THERMALLY ENHANCED OIL RECOVERY OPERATION SERVING 146 STEAM-ENHANCED WELLS WITH CLOSED CASING VENTS (TAYLOR LEASE)</td>
</tr>
<tr>
<td>S-1547-1067-3</td>
<td>126,000 gal tank</td>
<td>3020-05 E</td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>3,000 BBL FIXED ROOF CRUDE OIL PRODUCTION TANK, DRAIN TANK (LST HILLS OIL FIELD)</td>
</tr>
<tr>
<td>S-1547-1068-5</td>
<td>140 bhp IC engine</td>
<td>3020-10 B</td>
<td>1</td>
<td>117.00</td>
<td>117.00</td>
<td>A</td>
<td>140 BHP DETROIT-ALLISON MODEL #50437001 DIESEL-FIRED IC ENGINE USED TO START A GAS TURBINE</td>
</tr>
<tr>
<td>S-1547-1069-5</td>
<td>140 bhp IC engine</td>
<td>3020-10 B</td>
<td>1</td>
<td>117.00</td>
<td>117.00</td>
<td>A</td>
<td>140 BHP DETROIT-ALLISON MODEL #50437001 DIESEL-FIRED IC ENGINE USED TO START A GAS TURBINE</td>
</tr>
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</table>
### Detailed Facility Report

**For Facility=1547 and excluding Deleted Permits**

Sorted by Facility Number and Permit Number

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<tbody>
<tr>
<td>S-1547-1070-5</td>
<td>140 bhp IC engine</td>
<td>3020-10 B</td>
<td>1</td>
<td>117.00</td>
<td>117.00</td>
<td>A</td>
<td>140 BHP DETROIT-ALLISON MODEL #50437001 DIESEL-FIRED IC ENGINE USED TO START A GAS TURBINE</td>
</tr>
<tr>
<td>S-1547-1074-5</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR CE NATCO NATURAL GAS/TEOR FIRED STEAM GENERATOR #15 WITH NORTH AMERICAN MODEL #6131 BURNER, O2 ANALYZER/CONTROLLER AND THERMOTICS SO2 SCRUBBER</td>
</tr>
<tr>
<td>S-1547-1075-5</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR CE NATCO NATURAL GAS/TEOR FIRED STEAM GENERATOR #16 WITH NORTH AMERICAN MODEL #6131 BURNER, O2 ANALYZER/CONTROLLER AND ANDERSON SCRUBBER</td>
</tr>
<tr>
<td>S-1547-1070-16</td>
<td>131 WELLS</td>
<td>3020-09 A</td>
<td>131</td>
<td>9.34</td>
<td>1,223.54</td>
<td>A</td>
<td>THERMALLY-ENHANCED OIL RECOVERY OPERATION WITH 131 STEAM DRIVE WELLS WITH CASING VENT VAPOR COLLECTION AND CONTROL SYSTEM INCLUDING TWO AIR-COOLED HEAT EXCHANGERS AND TWO GAS COMPRESSORS</td>
</tr>
<tr>
<td>S-1547-1086-5</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR OIL-FIRED THERMOTICS STEAM GENERATOR (#11) WITH NORTH AMERICAN LO-NOX BURNER, HAUGE O2 CONTROLLER AND THERMOTICS SO2 SCRUBBER</td>
</tr>
<tr>
<td>S-1547-1088-5</td>
<td>62,500,000 BTU/HR</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MM BTU/HR STRUTHERS NATURAL GAS-FIRED STEAM GENERATOR HSG-174</td>
</tr>
<tr>
<td>S-1547-1089-17</td>
<td>62,500 kBTu/hr burner</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>62.5 MMBTU/HR STRUTHERS NATURAL GAS/VAPOR RECOVERY GAS-FIRED STEAM GENERATOR WITH A COEN MODEL #QNL-ULN ULTRA LOW-NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) AND SO2 SCRUBBER (LISTED ON S-1135-26) (HSG-186)</td>
</tr>
<tr>
<td>S-1547-1098-6</td>
<td>62.5 MMBtu/hr</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>DORMANT 62.5 MMBTU/HR GAS-FIRED STRUTHERS STEAM GENERATOR (HSG #181; DIS# 20622-61) WITH NORTH AMERICAN BURNER (TAYLOR LEASE)</td>
</tr>
<tr>
<td>S-1547-1100-6</td>
<td>55,000 gal stationary container</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>1,300 BBL FREE-WATER KNOCKOUT VESSEL (V-200) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1547-704 (AF DEHY)</td>
</tr>
<tr>
<td>S-1547-1101-6</td>
<td>29,400 gal stationary container</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>700 BBL FREE-WATER KNOCKOUT VESSEL (V-220) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1547-704 (AF DEHY)</td>
</tr>
<tr>
<td>S-1547-1102-6</td>
<td>55,000 gal stationary container</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>1,300 BBL FREE-WATER KNOCKOUT VESSEL (V-230) WITH VAPOR RECOVERY SYSTEM SHARED WITH S-1547-704 (AF DEHY)</td>
</tr>
<tr>
<td>S-1547-1104-2</td>
<td>37,600 gallons</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>37,600 GALLON FREE-WATER KNOCKOUT VESSEL WITH VAPOR COLLECTION (KING ELLIS LEASE)</td>
</tr>
<tr>
<td>S-1547-1105-1</td>
<td>1085 hp IC Engine</td>
<td>3020-10 F</td>
<td>1</td>
<td>749.00</td>
<td>749.00</td>
<td>A</td>
<td>1085 HP DETROIT DIESEL DIESEL-FIRED MODEL 16V-92 8163-7405 EMERGENCY IC ENGINE (#355) WITH TURBOCHARGER POWERING A 800 KW ELECTRICAL GENERATOR (HILL WATER SYSTEM)</td>
</tr>
<tr>
<td>S-1547-1110-0</td>
<td>7,000 gallons</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>7,000 GALLON HYDROCHLORIC ACID STORAGE TANK (T19-12) WITH FUME SCRUBBER - SECTION 27 WATER PLANT</td>
</tr>
<tr>
<td>PERMIT NUMBER</td>
<td>FEE DESCRIPTION</td>
<td>FEE RULE</td>
<td>QTY</td>
<td>AMOUNT</td>
<td>TOTAL</td>
<td>STATUS</td>
<td>EQUIPMENT DESCRIPTION</td>
</tr>
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<tr>
<td>S-1547-1111-0</td>
<td>15,000 GALLONS</td>
<td></td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>15,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - LOST HILLS TWO LEASE</td>
</tr>
<tr>
<td>S-1547-1113-0</td>
<td>10,000 gallons</td>
<td></td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>10,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - SECTION 27 WATER PLANT</td>
</tr>
<tr>
<td>S-1547-1114-0</td>
<td>billed under S-1548-45</td>
<td>999-99</td>
<td>1</td>
<td>0.00</td>
<td>0.00</td>
<td>A</td>
<td>2,730,000 GALLON (65,000 BBL) FIXED ROOF CRUDE OIL STORAGE TANK #T-471 WITH VAPOR CONTROL SYSTEM (SHARED WITH S-1547-384) INCLUDING COMPRESSOR(S), COOLER(S), LIQUID KNOCKOUT(S), AND PIPING TO FIELD GAS SYSTEM (ALSO PERMITTED AS S-1548-45 IN LOW SS)</td>
</tr>
<tr>
<td>S-1547-1115-4</td>
<td>25,900 gallons</td>
<td></td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>25,900 GALLON INDUCED STATIC FLATION CELL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-704 (A/F DEHY)</td>
</tr>
<tr>
<td>S-1547-1116-3</td>
<td>106,200 gallon</td>
<td></td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>UP TO 106,200 GALLON FWKO D-4008 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888</td>
</tr>
<tr>
<td>S-1547-1117-3</td>
<td>116,200 gallon</td>
<td></td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>UP TO 106,200 GALLON FWKO D-4009 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888</td>
</tr>
<tr>
<td>S-1547-1119-3</td>
<td>26,000 gallon</td>
<td></td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>26,000 GALLON INDUCED STATIC FLATION CELL D-4505 VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-686</td>
</tr>
<tr>
<td>S-1547-1121-4</td>
<td>12,000 Galton</td>
<td></td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>12,000 GALLON SURGE VESSEL, 12 FEET DIAMETER BY 14 FEET SEAM HEIGHT VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-704 (A/F DEHY)</td>
</tr>
<tr>
<td>S-1547-1122-1</td>
<td>48,048 gallons</td>
<td></td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>UP TO 104 HEAVY OIL TEST STATIONS (HOTS), CLOSED PIPING SYSTEM, AND ONE OR MORE PRESSURE VESSEL TEST TANK(S)</td>
</tr>
<tr>
<td>S-1547-1123-0</td>
<td>55,000 gallons</td>
<td></td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>12 FT DIA X 65 FT SHELL LENGTH 55,000 GALLON FREE WATER KNOCKOUT VESSEL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-1124-0</td>
<td>55,000 gallons</td>
<td></td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>12 FT DIA X 65 FT SHELL LENGTH 55,000 GALLON FREE WATER KNOCKOUT VESSEL VENTED TO SHARED VAPOR CONTROL SYSTEM LISTED ON S-1547-888 (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-1127-0</td>
<td>11,000 gallon</td>
<td></td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>11,000 GALLON HYDROCHLORIC ACID STORAGE TANK WITH FUME SCRUBBER - SECTION 2 WATER PLANT</td>
</tr>
<tr>
<td>S-1547-1137-1</td>
<td>150,000 gallons</td>
<td></td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>ONE 150,000 GALLON OILFIELD PRODUCTION SAND BASIN. - (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-1138-1</td>
<td>150,000 gallons</td>
<td></td>
<td>1</td>
<td>246.00</td>
<td>246.00</td>
<td>A</td>
<td>ONE 150,000 GALLON OILFIELD PRODUCTION SAND BASIN. - (DEHY 2)</td>
</tr>
<tr>
<td>S-1547-1142-2</td>
<td>85 MMbtu/hr</td>
<td>3020-02</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMbtu/hr NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
</tbody>
</table>
**Detailed Facility Report**

For Facility=1547 and excluding Deleted Permits

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<th>EQUIPMENT DESCRIPTION</th>
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<tbody>
<tr>
<td>S-1547-1143-1</td>
<td>85 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1144-1</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1145-0</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER, OR DISTRICT APPROVED EQUIVALENT, AND FGR APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1146-0</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1147-0</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1148-0</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1149-0</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1150-0</td>
<td>85.0 MMBtu/hr steam generator</td>
<td>3020-02 H</td>
<td>1</td>
<td>1,030.00</td>
<td>1,030.00</td>
<td>A</td>
<td>85.0 MMBTU/HR NATURAL GAS FIRED STEAM GENERATOR WITH NORTH AMERICAN 4231-85-GLE BURNER AND FGR, APPROVED TO OPERATE AT VARIOUS SPECIFIED LOCATIONS</td>
</tr>
<tr>
<td>S-1547-1152-1</td>
<td>51,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>51,000 GALLON FREE WATER KNOCKOUT VESSEL D-101B CONNECTED TO VAPOR CONTROL LISTED IN S-1154-854</td>
</tr>
<tr>
<td>S-1547-1159-3</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK, LACT TANK (F-108) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-854 - LOST HILLS 2 DEHYDRATION FACILITY</td>
</tr>
<tr>
<td>S-1547-1160-3</td>
<td>84,000 gallons</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>84,000 GALLON FIXED ROOF PETROLEUM STORAGE TANK, LACT TANK (F-109) SERVED BY VAPOR CONTROL SYSTEM LISTED ON S-1547-854 - LOST HILLS 2 DEHYDRATION FACILITY</td>
</tr>
<tr>
<td>S-1547-1202-0</td>
<td>23,520 gal</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>560 BBL FWKO VESSEL (V-102) CONNECTED TO TEOR WELL VENT VAPOR COLLECTION SYSTEM S-1547-707 (D&amp;E SANDS)</td>
</tr>
<tr>
<td>S-1547-1203-0</td>
<td>29,400 gal</td>
<td>3020-05 C</td>
<td>1</td>
<td>135.00</td>
<td>135.00</td>
<td>A</td>
<td>700 BBL FWKO VESSEL (V-103) CONNECTED TO TEOR WELL VENT VAPOR COLLECTION SYSTEM S-1547-707 (D&amp;E SANDS)</td>
</tr>
<tr>
<td>S-1547-1204-0</td>
<td>69,300 gal</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>1,650 BBL FWKO VESSEL (V-104) CONNECTED TO TANK VAPOR CONTROL SYSTEM S-1547-442 (LOCKWOOD)</td>
</tr>
</tbody>
</table>
### Detailed Facility Report

For Facility=1547 and excluding Deleted Permits
Sorted by Facility Number and Permit Number

<table>
<thead>
<tr>
<th>PERMIT NUMBER</th>
<th>FEE DESCRIPTION</th>
<th>FEE RULE</th>
<th>QTY</th>
<th>FEE AMOUNT</th>
<th>FEE TOTAL</th>
<th>PERMIT STATUS</th>
<th>EQUIPMENT DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-1547-1205-0</td>
<td>5,628 gal</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>134 BBL INLET SEPARATOR VESSEL (V-105) CONNECTED TO TANK VAPOR CONTROL SYSTEM S-1547-442 (LOCKWOOD)</td>
</tr>
<tr>
<td>S-1547-1206-0</td>
<td>85,680 gal</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>2,040 BBL FWKO VESSEL (D-101A) CONNECTED TO TANK VAPOR CONTROL SYSTEM S-1547-843 (MOCO)</td>
</tr>
<tr>
<td>S-1547-1207-0</td>
<td>85,680 gal</td>
<td>3020-05 D</td>
<td>1</td>
<td>185.00</td>
<td>185.00</td>
<td>A</td>
<td>2,040 BBL FWKO VESSEL (D-101B) CONNECTED TO TANK VAPOR COLLECTION SYSTEM S-1547-843 (MOCO)</td>
</tr>
<tr>
<td>S-1547-1209-0</td>
<td>2 wells</td>
<td>3020-09 A</td>
<td>2</td>
<td>9.34</td>
<td>18.68</td>
<td>A</td>
<td>TWO THERMALLY ENHANCED OIL RECOVERY WELLS WITH BEAM-DRIVEN CASING GAS COMPRESSORS OPERATED WITH PRODUCED GAS ROUTED TO PRODUCED FLUID LINE (BELRIDGE OIL FIELD)</td>
</tr>
<tr>
<td>S-1547-1214-0</td>
<td>6,500 gallons</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>6,500 GALLON OILFIELD CHEMICAL STORAGE TANK #1 - DEHY 20</td>
</tr>
<tr>
<td>S-1547-1215-0</td>
<td>6,500 gallons</td>
<td>3020-05 B</td>
<td>1</td>
<td>93.00</td>
<td>93.00</td>
<td>A</td>
<td>6,500 GALLON OILFIELD CHEMICAL STORAGE TANK #2 - DEHY 20</td>
</tr>
</tbody>
</table>

Number of Facilities Reported: 1
ATTACHMENT D

Title V Compliance Form
Title V Compliance Certification Form

San Joaquin Valley
Air Pollution Control District

I. Type of Permit Action (Check appropriate box)

[ ] Initial Title V Permit
[ ] Permit Renewal
[ ] New Title V Permit

COMPANY NAME: Aera Energy LLC
FACILITY ID: S - 1547

1. Type of Organization: [X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility

2. Owner's Name: Aera Energy LLC

3. Agent to the Owner:

4. Compliance Certifications will be submitted on:
   - Year 1: 3/2/2007
   - Year 2: 3/2/2008
   - Year 3: 3/2/2009
   - Year 4: 3/2/2010
   - Year 5: 3/2/2011

Other dates if required by regulations or compliance schedule:

II. Compliance Certification (Read each statement carefully and initial each circle for confirmation):

- Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s) with which the source is in compliance as identified in the Compliance Plan.
- Based on information and belief formed after reasonable inquiry, the source identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term as identified in the Compliance Plan, on a timely basis.
- Based on information and belief formed after reasonable inquiry, the source identified in this application is not in compliance at the time of permit issuance with the applicable federal requirement(s), as identified in the Compliance Plan, and I have attached a compliance schedule.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true, accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the foregoing is correct and true:

[Signature]
Signature of Responsible Official

Barry Biggs
Name of Responsible Official (please print)

[ ] Senior Vice President
Title of Responsible Official (please print)

Mailing Address: Central Regional Office * 1990 Gettysburg Avenue * Fresno, California 93726-0244 * (559) 220-5000 * FAX (559) 230-6061

TVFORM-005

11/29/2006